THE INFORMATIVE GUIDE FOR ALL ATARI COMPUTER OWNERS

ATARI ST REVIEW

INCORPORATING ATARI ST USER

ISSUE 35 JANUARY 1995 £4.25 OVERSEAS £4.50 IDG

PEAK PERFORMER

Is Apex Media worth the wait?
Full report inside

TEN BIG REVIEWS

including Imagecopy 3.5, Zero-5, Notator Logic Audio and Obsession

Radio 1 FM, Skylab and the ST...

TWO COMPETITIONS
Six copies of Calamus and five Skylab CDs up for grabs!

MagiCMac

The saviour of ST software?
Preview Inside

UNBEATABLE!
VIDEO SUPREME
ZERO-5
SEVEN UTILITIES

INSIDE: Apex Media • Imagecopy 3.5 • Notator Logic Audio • New For 1995 • Epson Stylus • Art For Kids • Zero-5 • Obsession • Chequered Flag • Studio Convert • Idek Monitors • Body Matters • And Lots Of Tutorials...

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JANUARY 1995

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COVER FEATURE

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PEAK PERFORMER

The Falcon promised much on the graphics front when it first appeared, but despite late test versions of *Chromastudio*, the promise remained just that – an unfulfilled potential.

But this is set to change with the emergence of *Apex Media*, a truly awesome Falcon-specific graphics package. While intended primarily for animation, *Apex* packs a serious punch in the areas of design and morphing.

Also on offer is support for digitiser cards such as the Matrix Screeneye. While this includes a software bundle, *Apex* can recognise its existence inside the Falcon and use it. With Titan Designs' Exposé card also imminent, the future looks rosy. Read our four-page reviews and previews starting on page 20.

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... the source of all information! This is where you'll find the best tutorials, your opinions, hints 'n' tips and our answers to your questions...

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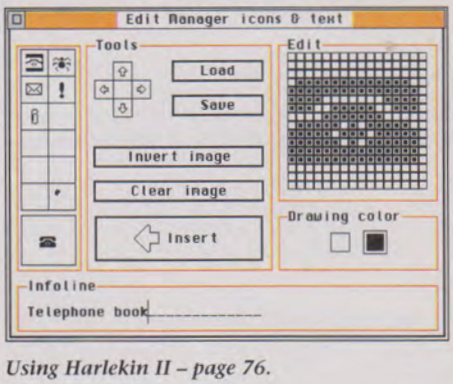

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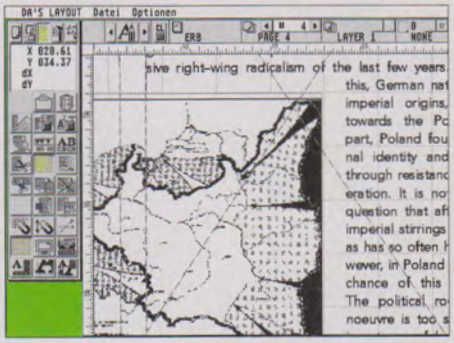

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VIDEO SUPREME

... the ST's superb video titler! This commercial program is jam-packed with features – turn to page 12 for our tutorial.

ZERO-5

... another ST Review exclusive. Fly your first mission with this excellent space age shoot-'em-up! See page 52.

plus see page 14 for

ÉGALE – excellent compare utility
FSEARCH – find words the easy way!
BOBTRACK – *the* Falcon tracker
and 5 more utilities!

OVER AND OUT

Four days before this issue went to press, I was informed by my managing director that *ST Review* had been sold to Pearsons, the publisher of *ST Format*. The intention is to seamlessly merge this magazine into the latter, effectively ending an existence that started back in May 1992.

As many of you will be aware, I have been associated with *ST Review* since issue 3, first as technical editor and then editor. The magazine has been a substantial part of my life for the last two years and I shall certainly miss it, especially as the Atari world is about to get very interesting. This editorial has been written with *Papyrus*, not an unusual occurrence you may think – except that the word processor was running on a Mac PowerBook 170 at the time! How? Courtesy of *MagiCMac*, possibly the most important program ever to emerge from Germany. *MagiCMac* allows you to run almost all of your standard Atari applications on a Mac, including the likes of *Calamus*, at quite astonishing speeds. Die-hard Atari fans flocked to see this at the recent *ProTOS* show in Germany. Many of you have been sitting on the fence, trying to decide whether to take the plunge and buy a Falcon. Unfortunately, Atari is no longer manufacturing or developing TOS-based computers which leaves you without an obvious upgrade path. If you're thinking of jumping ship and moving over to a PC, wait until *MagiCMac* is launched at the end of January 1995 and check it out. You'll be quite amazed.

I owe a great debt to the finest set of freelance writers in the land without whom it would have been impossible to produce a magazine as good as *ST Review*. Jon Ellis, Graeme Rutt, Mark Baines and Steve Delaney all deserve a mention as does Tina Hackett, our games editor. Andrew Wright and Nial Grimes have proved themselves to be top notch writers, one as cynical as hell and the other with a seriously wacky sense of humour – I'll leave it to you to decide which is which. As for Ofir Gal, who has become a close personal friend through *ST Review*, his depth of knowledge and dedication are matched only by his total lack of timekeeping!

Me? Well I've promised my wife that I'll finally clear the kitchen table and then I'm off to work on *Macworld* magazine in London. So here's wishing you all the very best in the future.

Yours sincerely,

V. Lennard

Vic Lennard, Editor

INDEPENDENT IMPACT

Impact Software recently announced that its highly sought after game, *Team*, will not be released through IDS. The original contract to produce the game was with Wright & Hayes under the trading name of IDS. Since Wright & Hayes closed down, Impact Software has become increasingly dissatisfied with the way Midland Software have handled the marketing of *H.E.R.O.*. Ralph Lovesy of Impact said that Midland Software had taken no interest in *Team* and voiced no objections to Impact releasing it themselves.

The fact that Midland Software gave up its premises to work from home also dented Impact's confidence in them. In last month's issue of *ST Review*, Andy Fern quoted the price of *Team* to *ST Review* as being £14.95 as opposed to £24.95, the price allegedly set out in Impact Software's contract. The result of this is that Impact Software allege breach of contract on the part of IDS with regard to the agreed price. Impact also say that it was not informed about Wright & Hayes going out of business and tried to contact them for two weeks to no avail. As a result, Impact Software is taking over all the marketing, advertising and distribution of the game and wish to stress that it no longer has any links with IDS.

The STe version of *Team* will be available before the end of the year at a cost of £24.95. A Falcon version is expected shortly after and will run in 256-colour mode, featuring 16-bit stereo sound. It will run on both RGB and VGA monitors and will also be priced at £24.95.

The next release will be an STe platform game featuring cartoon-style graphics. This product is in an early stage of development and no further details are currently available. A demo of *Team* is available from Impact Software, 12 Bell Lane, Syresham, Northants NN13 5HP. Tel: 01280 850450.

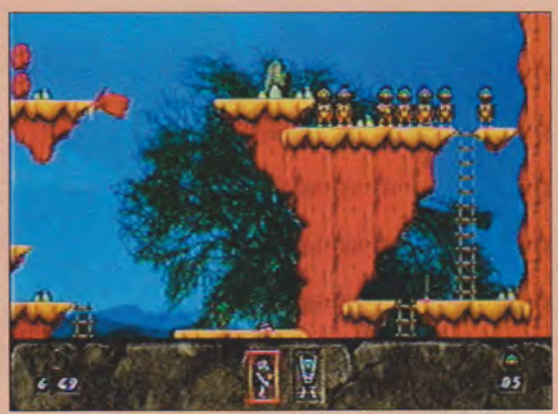
FALCON FLYERS

Just when everyone thought that highly sought after Falcon games such as *Steel Talons*, *Llamazap*, *Evolution Dino Dudes* and others had been axed in favour of the Jaguar versions, *ST Review* can reveal that the Falcon versions have indeed been completed and are to be released through 16/32 Systems (01634 710788). In addition, 16/32 has also secured the distribution rights to the Falcon version of *Pinball Dreams*, converted from the Amiga A1200. 16/32's Nick Harlow told *ST Review* that he plans to release at least twelve Falcon-only games over the next year and that an STe version of *Pinball Dreams* may also be on the cards.

Llamazap is the first of the batch to make it onto the shelves. It's a fast action shoot-'em-up from Atari "guru" Jeff Minter, features 25 levels of "sheep defying violence" in typical Minter style and costs £24. *Llamazap* runs on a 4Mb Falcon and requires a Jaguar controller pad. If you don't already own one, 16/32 can include the controller with the game at a combined cost of £40.

Pinball Dreams is described as "the ultimate in Pinball games", taking full advantage of the extra colours and superb sound capabilities offered by the Falcon. Four tables, entitled *Ignition*, *Beat Box*, *Steel Wheel* and *Nightmare*, are available and up to eight players can participate. Despite ratings of between 87% and 98% for the Amiga version, the Falcon version is said to feature even faster, smoother graphics and improved sounds. *Pinball Dreams* costs £24.

Both *Llamazap* and *Pinball Dreams* are available now. Dates for *Steel Talons* and *Evolution Dino Dudes* are yet to be confirmed.



Yo dude – looks like Evolution Dino Dudes will finally make it onto the Falcon...

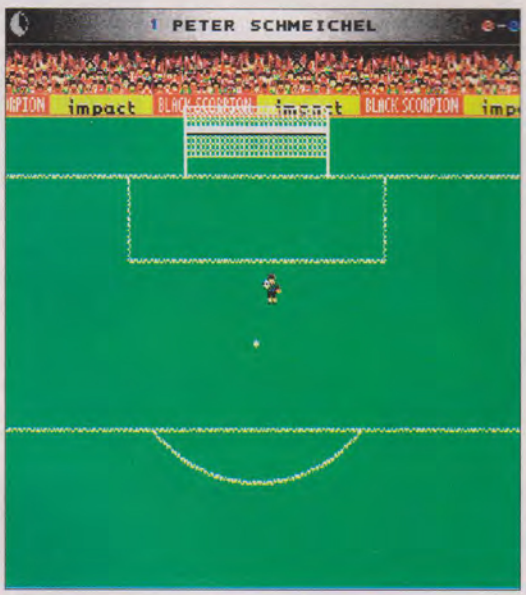
IDS SHOCK

ST Review investigates a number of complaints...

Last month, we reported that Wright & Hayes Graphics, publishers of *ST Handbook*, had ceased trading and that Midland Software had taken over IDS, the software development part of the business. Since then, several companies and individuals have reported difficulties in their dealings with Midland Software.

It became obvious that something odd was afoot when we called Tony Greenwood, programmer of *H.E.R.O.*, to discuss his two forthcoming releases. We were most surprised to hear that there are no current plans to produce a follow up to *H.E.R.O.*, despite being told by Andy Fern of Midland Software that the game is due to be released in January. When asked about the *Programmer's Advanced Guide To STOS BASIC*, Tony confirmed that he had discussed the possibility of such a package with Wright & Hayes but that the idea had been abandoned when they went out of business.

The last hero – no follow-up to H.E.R.O. according to author.



Team player – Impact Software will be bringing out Team independently (see story on left)

COMPANY MATTERS

Floppyshop contacted us regarding a problem they are allegedly experiencing with Midland Software over stock worth almost £900 which had apparently gone missing in the post. A consignment of *EZ Art Professional* and *Family Roots II* had been to *Wright & Hayes* on a sale or return basis in July for the then forthcoming Atari Shows. Few copies were sold at the two events and, at Floppyshop's request, Wright & Hayes were to retain the remaining stock for the shows November and December and settle up for copies sold on a monthly basis. The remaining stock was then to be returned to Floppyshop. When Wright & Hayes closed down, Midland Software are alleged to have confirmed that the remaining stock had been left behind in the office and agreed to return the goods. Floppyshop's Steve Delaney said: "I spoke to Simon Fern (the proprietor's brother) who confirmed that the goods had been returned to us by Parcel Force on October 28. When they had not been received by November 9, I called Andy Fern who said that he would check it out. A few days later, he confirmed that Parcel Force were investigating the matter." Floppyshop then initiated an enquiry through Parcel Force's Scottish headquarters in Glasgow on November 14 without success. The software was then "found" by Midland Software at which point Floppyshop sent a courier to retrieve it.

Datastor Ltd, a major supplier of blank disks and other accessories, also contacted us. Datastor's Phil Paine informed us that he had supplied a quantity of blank disks to Wright & Hayes just before they went out of business. On October 17, he received a letter from Vic Wright stating that Wright & Hayes had ceased trading and that the outstanding debt in respect of the blank disks would be taken over by AWF PDL, Andy Fern's PD library, and that the latter would be contacting Datastor to order further supplies. Andy Fern called them the same day and allegedly confirmed that he accepted the Wright & Hayes debt and wanted to order some more disks. Datastor Ltd offered to despatch the order as soon payment was received on the now overdue Wright & Hayes account. A cheque for £142.41 was received on October 27 and a further consignment of goods were despatched to Andy Fern on October 28. However, the cheque bounced and was returned on November 4. After several discussions between Phil Paine and Andy Fern, the latter is said to have agreed, on November 11, to pay the total outstanding amount by banker's draft. When this failed to materialise, Phil contacted the bank and then spoke to Midland Software on November 23. Andy Fern said that there had been a misunderstanding and that a personal cheque had been sent on November 18. Datastor were still awaiting the cheque as we went to print at the end of November.

COURT ACTION

JCA Europe also supplied goods to Wright & Hayes. A number of copies of *Calamus* and *Rainbow* were supplied to Wright & Hayes in July, along with some blank disks, for the forthcoming Atari Shows. The disks were on a firm sale basis but the software was supplied on a "sale or return" basis, the total value of the transaction over £1,000. JCA received a letter from Wright & Hayes at the beginning of September stating that they were going on holiday for two weeks and would settle their account on return. Four weeks later, another letter arrived informing them trading had ceased and that IDS had been transferred to Midland Software.

No telephone number or address were given on the letter, so JCA's Alastair Craig called the Wright & Hayes offices and spoke to Simon Fern, a former employee. Simon Fern is alleged to have said that he didn't know who Vic Wright was and that he had just moved into the premises the previous week. Around the same time, *Calamus* registration cards came back to JCA Europe from copies that had been JCA supplied to AWF PDL – and yet customers claimed to have purchased the goods from Wright & Hayes! Around the same time, a cheque for £135, made out to JCA Europe in respect of goods supplied to AWF, bounced. JCA Europe raised two separate County Court actions, one jointly against Paul Hayes and Victor Wright trading as Wright & Hayes Graphics, the other against Andrew Fern.

JCA has confirmed that another cheque has since been received from Andy Fern for £135 plus court costs and that as a result, all action against him has now been dropped. Victor Wright and Paul Hayes have informed the County Court that they admit full liability in respect of a claim for £1,019.20 against them: it is alleged that they offered to reimburse JCA Europe by repaying the debt at a rate of £10 each per month. JCA have rejected the offer and the matter has been referred back to Court. Alastair Craig (01734 452416) has asked that anyone else who has suffered a loss at the hands of any of the above persons should contact him as he will be happy to offer them advice and assistance in pursuing their grievances.

Nice idea – but will IDS survive?

A number of serious allegations have been made concerning the business practices of Wright & Hayes and Andrew Fern. It is not the intention of *ST Review* to sit in judgement, but rather to bring such matters to the notice of our readers. All of the above allegations were presented to us in writing from the parties concerned and the court actions embarked upon by JCA Europe are a matter of public record.

NORTHERN HIGHLIGHTS

Joe Connor reports on the recent ST Review Atari shows...

The recent Glasgow and Leeds shows attracted around 400 visitors – less than the Summer shows but still demonstrating a healthy level of support for Atari computing. As usual, the atmosphere was relaxed and a real tonic for dedicated Atarians with plenty of opportunity for in-depth demos of the latest applications or a chat with favourite vendors.

Compo was demonstrating CD-ROM ROM in the UK for the first time. This device plugs into the cartridge port of any Atari computer and supports any CD-ROM drive with a Mitsumi interface. *NeoDesk 4* was available – and plenty of people took the opportunity to upgrade their copies for £24.99. Compo had put together an amazing Naksha scanner show bundle for £99 (see offer on page 67) including *Studio Photo*, *Studio Convert* and a custom version of *Touch-Up*. This was undoubtedly the outstanding bargain at the show.

Use me – Calamus User now has a range of helpful disks.

The engineers in the service area worked hardest of all, installing a constant stream of memory and TOS upgrades along with a sprinkling of more exotic upgrades. The number of people with machines had something to do with admission being free for them!

16/32 Systems had the Falcon version of *Llamazap* on sale, optionally bundled with a Jaguar games controller. In between "serious" demonstrations of Lexicor's *Xenomorf* and *Metamorphosis*, Nick Harlow could be seen flying the preview version of *Steel Talons*, an excellent Falcon conversion of the Lynx version with enhanced sound and graphics. Asked about Jaguar games Nick said: "There should be at least 12 new titles over the next year and hopefully three of those before Christmas."

The 16/32 PD/Shareware titles were popular as usual, no doubt helped by the revamped and extended catalogue which should be available by the time you read this.

Falcon Fact File set up a lively meeting point, perched on the end of the 16/32 stand at the Leeds show, and were doing a great job convincing fellow Atarians to keep the faith and buy a Falcon – give 'em a free stand at every show!

System Solutions were taking orders for the long-awaited *NVDI3* which offers both Speedo and TrueType font support along with a comprehensive range of printer drivers. On the hardware front, Desktopper seems to be the popular solution for boldly adding upgrades where nothing was installed before and the extensive range on offer left no excuse for going home with the same machine!

Titan Designs was previewing *Apex Media*, a true colour animation and graphics program (see review on page 20), written especially to take advantage of the Falcon's DSP. The Black Scorpion programming team made an appearance and David Encill was treating prospective customers to some stunning demos.

Apex Media – worth buying a Falcon for...

Rombo made a welcome return to the ST scene demonstrating the Vidi ST(12) colour digitiser – a snip at just £69. Vidi ST grabs colour or greyscale images from a palette of 4,096 colours on any ST in low resolution, or in true colour at resolutions up to 740 by 480 pixels on a Falcon. Rombo commented: "Chatting to ST enthusiasts makes a refreshing change after exhibiting at recent PC shows". Sure does!

CGS was promoting *Quill* which enables freehand drawing using the Tabby graphics tablet. Asked if there was anything new, Ray Cross beamed: "It's all new! We've got new releases for most of DA's products".

Go Direct almost exhausted its stock of *ST Review* and *ST User* back issues but there was something for anyone with a few quid left over after bagging their major purchases.

Calamus User promoted its club magazine and offered a range of support disks. Steve Llewellyn enthused over the new *User To User* disks crammed with tips drawn on the experiences of *Calamus* users around the world. The three-disk set was on sale for £40 or £15 per disk.

Scan this – Compo put together a stunning scanner deal...

On behalf of the organisers, Neal O'nions reported that despite the reduced number of visitors, takings were up. Now let's look forward to the Birmingham and London shows.

MERLIN MAGIC

The latest from Merlin is that *Obsession* is finally available at £24.95. See our full review on page 54. Also just out is a new game called *Cotus*, a graphic-based adventure game with arcade battle sequences. The game is entirely joystick controlled in the same vein as the *Grandad* games by Ian Scott and the only text input is where you have to specify how much you want to gamble at the betting shop! Everything in *Cotus* is icon-controlled – to eat, drink, fight and so on. With many games adopting a 3-D view nowadays, *Cotus* bucks the trend by using an overhead view. What makes this game different from so many of its compatriots is that no two games can ever be the same. Each time you start a new game, a randomly-generated Dungeon is created. Cotus is available now for £7.99.

In addition, Merlin is also selling *Plonker* by Dunces Cap Software at £9.99 and *Zero-5* from Caspian Software at £24.95 (see review on page 50). *Towers* manuals are in stock although the price of these is variable due to currency fluctuations – call for latest prices.

As Merlin approach its third birthday on New Year's Day, everyone who buys software from them during December and January is being entered into a free draw. First prize will be *Obsession* or *Zero-5* for STe owners or *Rock 'n' Roll Clams* if you own an STFM. There will also be second and third prizes. Finally, Merlin is the first PD library to offer an *Internet* ordering service! Any of its software can be ordered by emailing POPEMERLIN@DELPHI.COM with your credit card number. For further details, contact Merlin, at P.O. Box 77, Stroud, Gloucs. GL6 9YD. Tel: 01453 882793.

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PRO SHOW

Vic Lennard reports back on the 1994 ProTOS Show

It's fair to say that German Atari users take their machines seriously, hosting more shows than the rest of the world put together. ProTOS is the professional users' show, this year held on November 27 and 28 in Hennef, just outside Bonn.

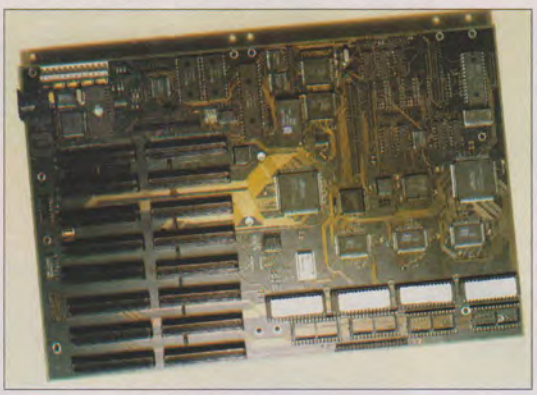
The most striking sign on entering the hall was "*Calamus* für den Apple Mac". The ST's premier DTP package on the Mac? How comes the Atari world hadn't heard about this? Making a bee-line for the DMC stand, there indeed was *Calamus* running on a Performa 630 in 256 colours and with an astonishing screen redraw speed – but with the very distinctive *MagiC* logo in the top right corner of the screen. *MagiCMac* had indeed arrived!

Over on the Application Systems Heidelberg (ASH) stand, Atari enthusiasts crowded around the Mac Performas, trying to take in just what this software quantum leap means. *MagiCMac* (see preview on page 25) is essentially an ST emulator for the Mac, but provides performance way beyond that of a TT on a very modest Mac. Important to the German market? Certainly – Apple's first comment was: "will *Calamus* work?"! 2B (Wilfried and Sven Behne) and ASH were given developers' information by Apple Germany and an introduction to the Mac's operating system when they started the project in early September this year. The show version was seven weeks away from final release yet appeared very stable.

Some like it hot – that was some curry he had for lunch...

SOFT SIDE

The Compo stand encompassed many of the serious players including no! software, showing *That's Write 4*, and Overscan. But most interest was shown for a UK product – *Apex Media*, distributed in Germany by Compo (see full review on page 20). This powerful animation package spent most of the two days morphing a female face into a cheetah! However, it had a rival in the form of the Falcon-specific *NeoN* on the Team stand, a texture-mapped 3-D image creator. Included in its armoury are the ability to extrude and rotate solid objects, map 2-D pics to 3-D objects and create the necessary ambient environment. A five-minute video created with the program was most impressive and, oddly enough, on-screen text was in English! Apparently, the German authors couldn't fit the words on in their own language!



High flyer – GE-Soft's Eagle offers the facility to upgrade to a new main processor through a plug-in board.

Home from home – Dave Link of HiSoft.

2B spent a great deal of time on the disk copier, knocking out upgrades for *NVDI3*, while ROM Software continued to impress with *Papyrus*. Version 4 will offer a word counter, two-page display, colour picture support and much more when released early in '95.

HARD CONTENDERS

On the hardware side, the show offered three main products. MW Electronics had the Medusa T60 on display, a 68060-based version of its powerhouse, while GE-Soft finally allowed its Eagle to land. Although only driven by a modest 32MHz 68030, the pricing could be interesting in the UK – around £1,800 and with 68040, 68060 and 486/586 plug-in processor boards on the way. MW Electronics also had the latest version of the PAK 68/3, now with the main ST board running at between 12 and 15MHz. This also increases the performance of the video shifter so giving higher resolution on a standard Atari monitor. Add a 50MHz accelerator, 4Mb or 16Mb of FastRAM and a full 32-bit bus and you have a serious contender for performer of the year!

Tony Sexton of Lighthouse, creator of the DeskTopper, had a couple of surprises in the form of the Space Case, a 19" rackmounted Falcon case for musicians, and the Drive In, a similar item for hard disks.

IN GENERAL

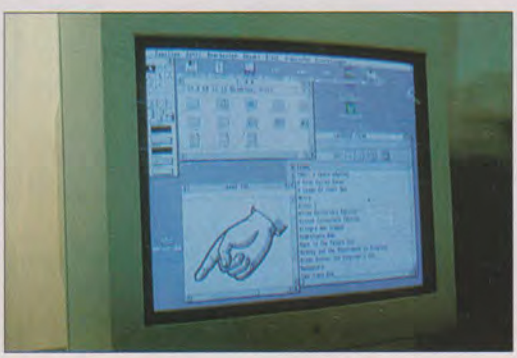
A British presence was also evident, including Vaz Shah of Gasteiner and David Link of HiSoft. Neal O'nions was to be seen on the Compo stand; visitors included Karl Brandt of System Solutions along with short, rotund tech-heads, usually seen frequenting UK shows.

Oddities included piles of German Atari Portfolios going for around £32, more VCS games consoles than could be counted and a proliferation of CD-ROMs, including various, shall we say, "X" rated offerings.

Light show – Neon, a texture mapped animation creator.

After two days spent watching – and hearing – *AvP* and admiring the floor show of semi-clad females and fire-breather, the UK certainly seems a quieter place...

Top this – Tony Sexton, the man behind the DeskTopper, launched Space Case and Drive In, a pair of 19" rackmounted cases for musicians.



Just Magic – yep, it's the Ease desktop and various programs running on a budget-priced Mac Performa 630...

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VISA

SUPREME TITLE

This month's cover disk give-away lets you create stunning video titling sequences and demos. Andrew Wright helps you on your way...

Video Supreme is a superb little *STOS*-based program that was designed to create title sequences and intros for video cassette tapes as well as stand alone disk-based demo sequences. On the cover disk you'll find a fully working version of the frame-based editing module.

The program displays a sequence of low resolution screens in either Degas, Neo or compacted *STOS* formats. Each screen can be displayed in 270 different ways dissolved in a further 184 ways. A display or dissolve equates to a frame in *Video Supreme*, each of which can have a sound sample attached to it, and up to 200 frames can be included in a single sequence.

GETTING STARTED

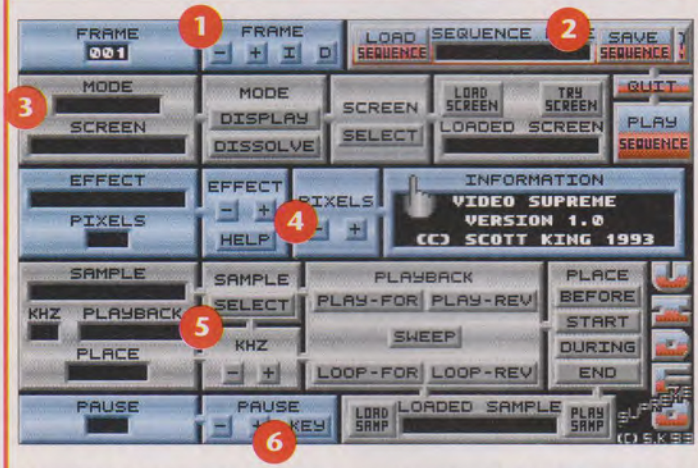
To get started, use *STRBAKUP.TOS* to make a copy of the cover disk and then delete everything except for *V_SUP.TOS*. Double-click on this file and it will extract all the components of the special *ST Review* demo, placing files inside four folders named *AUTO*, *SAMPLES*, *SCREENS* and *SEQUENCE*. To run the demo sequence, run the program *EDITOR.PRG*, which is inside the *AUTO* folder, click on the LOAD SEQ button at the top of the menu screen, followed by PLAY SEQ button on the right.

The editor is inside an *AUTO* folder for the benefit of users with only half a meg of RAM as this saves 32Kb of memory. If you don't want the editor to auto-start, move it out of the *AUTO* folder.

Once you've looked at the demo, quit the program and reload.

The opening screen from our exclusive demo.

MAIN FEATURES



The editor is the heart of the program. It's divided into six colour-coded sections: file, frame, screen, effects, sample and pause.

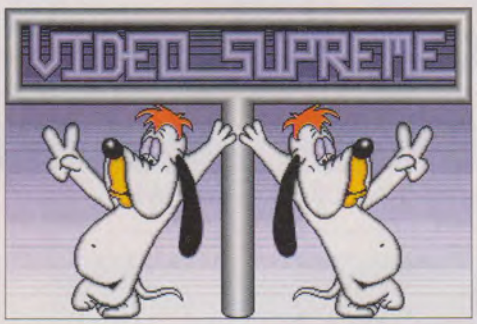
1. **Frame section**: includes counter with buttons for advance, retreat, insert and delete.
2. **File section**: load, save and play a sequence.
3. **Screen section**: each frame is made up of either a screen being displayed or a screen being dissolved. To use a screen, click on SELECT then LOAD.
4. **Effects section**: the pixel value is used for various parameters while "+" and "-" cycle through the options. The HELP button is useful too!
5. **Sample section**: samples can be played back at any speed in one of several ways including backwards, forwards or both (SWEEP). They can also repeat (LOOP) and begin before, at the start, during or at the end of a frame.
6. **Pause section**: screens can be displayed for up to 999 seconds. The key option instructs the program to wait for a key press before moving on.

DISPLAYS 'N' EFFECTS

Click on the DISPLAY button in the MODE box. You have now defined frame 001 as a display frame. Click on SCREEN SELECT and when the file selector appears, you will see a list of screens you can load (figure 1). Only those in the SCREENS folder are listed and they are divided into .PI1 (*Degas*), .MBK (*STOS* compacted) and .Neo columns. In this case I'm going to load one of my own *Degas* files – a digitised image of a car – but you can load any picture you like or use one of the screens supplied with the demo (figure 2).

Back at the main screen, click on LOAD SCREEN and you will see the image. Click on either mouse button to return. Now look at the EFFECT box. Clicking on the "+" and "-" buttons cycles through the range of effects. The HELP button provides a brief description. Note that the "+" or "-" buttons in the PIXELS box let you alter the parameters of some of these effects.

Select the effect you want – I like the WAVE effect best – and view it by clicking on TRY SCREEN. If you want to apply a different effect, click on the "+" and "-" buttons in the EFFECT box to cycle through the full range. There is an astonishing



The third demo screen displayed normally...

... and the same screen using the Shutter effect!

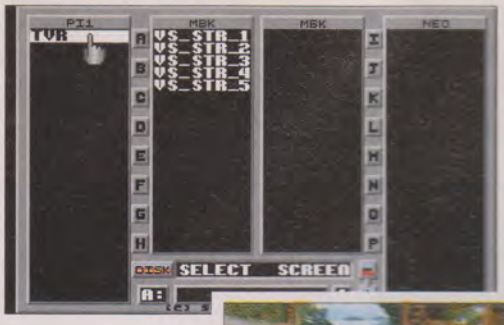


Figure 1: a click on SCREEN SELECT brings up the file selector with a list of screens.

Figure 2: Load any picture you like or use one of the screens supplied with the demo.

number of effects, including several moving or animated effects. The HELP button provides a brief description.

The next step is to choose a sampled sound. Click on SAMPLE SELECT and choose sample *VS_STR_1* from the file selector. Back at the main menu, make sure you load the sample and choose an option. Samples can play forwards, backwards, or in a loop and can start before the visual effect, play continuously through it or directly afterwards. Select SWEEP and START and then the KEY button in the PAUSE box (figure 3). This means you can watch your effect until you press a key.

Now click on TRY SCREEN once more. If all has gone well you will see your image being distorted in a wave pattern (figure 4) with the lightning sound playing itself forwards and then backwards. Weird!

All that remains is to "undisplay" this frame. Click on the "+" button in the FRAME menu, select DISSOLVE and repeat the process again, saving the sequence when you've got it right. You can also define how long each frame should remain or whether it should just wait until a key is pressed.

GETTING THE BEST

Video Supreme will need some help if you really want to create a good effort. To create the screens from scratch you will need a good paint program that works and saves files in ST low resolution – *Degas Elite*, *Hyperpaint* or one of the shareware programs like *Crackart* will do admirably.

You will also need a sampling cartridge if you want to create your own sound effects. Sound samples need to be between 6 and 20kHz and in .SAM format. The editor will only load samples under 30Kb; larger ones have to be played using the *QuickTry* program provided with the full version of *Video Supreme*.

To record a sequence to video, you will need to use your ST's TV lead. Instead of plugging it into the TV, plug it into the VCR where your fixed (rooftop) aerial lead normally goes.

All you need to do is tune your VCR to receive the ST's signal and you're ready to record – press Record on the VCR and **Play Sequence** in Video Supreme.

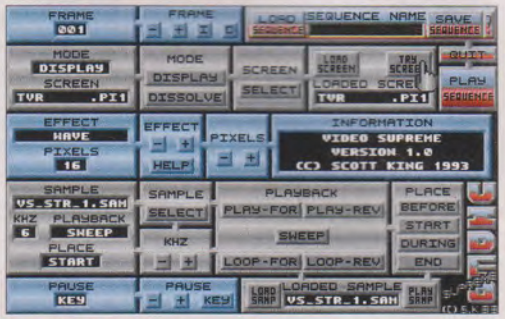


Figure 3: by selecting the KEY button in the PAUSE box, you can watch your effect until you press a key.

Figure 4: here's your image being distorted in a wave pattern – and you should be able to hear the lightning sound...

SAVE MONEY!

● **SAVE £7.00!** Get the full *Video Supreme 1.0* package for just £7.95. This includes a 22-page comb-bound manual, four additional programs, 20 demonstration screens and 24 sound samples. The other programs include a run-time program for VSS sequences, a testing program to play samples over 30Kb, a program to prepare sequences for the run-time program and a compacter for Degas and Neo files.

● **SAVE £11.95!** Get *Video Supreme 1.0* with *Screenmaker*, the program that allows you to create title screens, for £14.95. This lets you select from 70 fonts, alter the size pixel by pixel and overlay text on top of pictures.

● **SAVE £5.00!** Get *Video Supreme 2.0* for £24.95. Just released, this offers interrupt-driven music with graphical VU metering, control-coded scroll lines to move text on and off the screen, full screen frame-by-frame animation from memory and a range of new special effects and modules. There's also a comprehensive manual (over 100 pages) and step-by-step tutorials.

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☐ ***Video Supreme 2.0***.....£24.95

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FAMOUS FIVE

Five more utilities to add to our cover disk trio of Video Supreme, Zero-5 and Égale!

ST-GUIDE

Fairware • H. Weets • Medium/High Res.

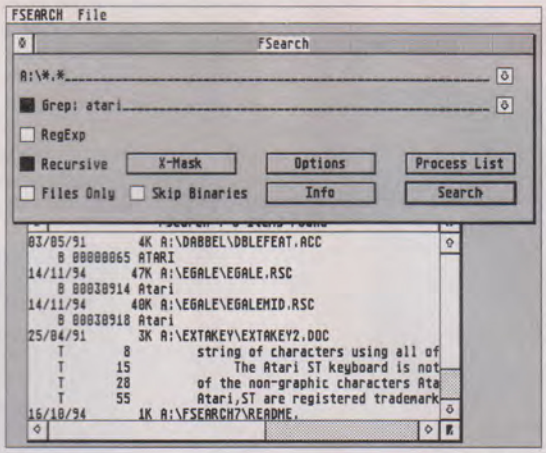
On-line help system for all STs...

ST-Guide is fast becoming a standard on the Atari range of computers. It provides a help system that is both context-sensitive and interactive, simply by pressing the <Help> key on your keyboard. There is a growing number of programs that support *ST-Guide* – *FSearch*, which is also included on this month's cover disk, is one example.

To install *ST-Guide*, copy the files *ST-GUIDE.ACC* and *ST-GUIDE.INF* to your boot disk, reset the computer and put the cover disk back in the drive. Run up *FSearch* and press the ST's <Help> to open *ST-Guide*.

In addition, *ST-Guide* can be used as a simple text file viewer. Select it from the Desk menu, click on the Extra button and select Open from the pop-up menu. Now select the file you wish to view and click on "OK". Check out our *Spot The Dog* story!

See the text file for information on how to customise the program.



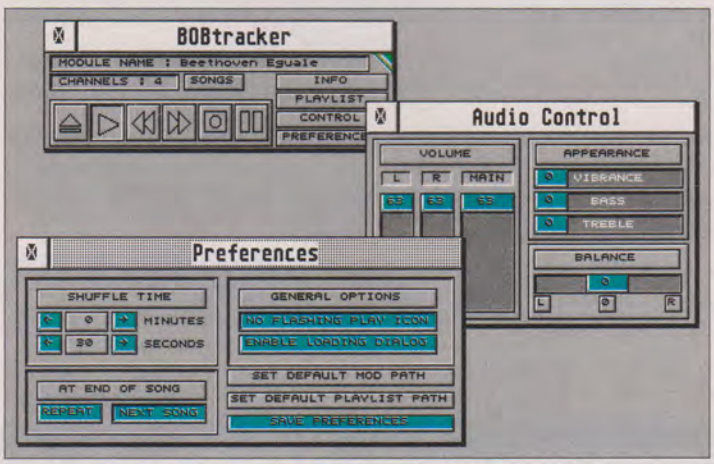
The ultimate file search utility! FSearch runs as a desk accessory and has a built-in help system.

BOB TRACK

Shareware • N. Stewart • All Res.

A Falcon .MOD file player...

Bob Track is a powerful .MOD player, designed specifically for the Falcon, that can run both as a desk accessory and a stand-alone program. To try it out, run the program, click on the Play button and select *BTHOVEN.MOD* in the file selector. The program features sound controls and uses a play list to stack up a sequence of files. Read *BOBTRACK.DOC* for more info.



Bob Track uses the Falcon's sound system to play .MOD files.

DABBEL FEATURE

Shareware • C. Brod • Medium/High Res.

Disable grow/shrink boxes...

This desk accessory has two features. The first disables those annoying grow and shrink boxes you see whenever a dialogue box is displayed on-screen.

The other enables you to redirect drive access. This is useful if you have programs that insist on running from a floppy drive when you want them to run from your hard disk, or if you need to temporarily use non-default settings from another drive.

To install, copy *DBLEFEAT.ACC* and *DBLEFEAT.RSC* to your boot drive and reset.

EXTAKEY

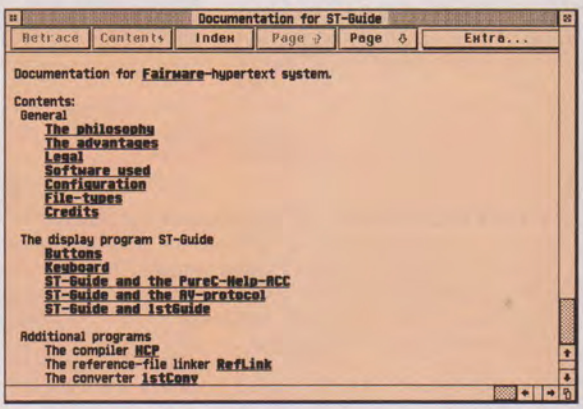
Shareware • G. Wrenn • Medium/High Res.

The full Atari character set...

Enter the Greek, Hebrew and Maths symbols that are not available from the keyboard! *ExtaKey* works as if the characters were typed in and the text appears in your current application such as a word processor.

To install, copy the files *EXTAKEY2.ACC* and *EXTAKEY.RSC* to your boot drive and reset the system. Select ExtaKey from the Desk menu and click on the characters you need.

ST-Guide is now becoming the standard help system for GEM programs.



When finished, click on Send String and watch the text appear in your word processor.

FSEARCH

Shareware • M. Davidson • Medium/High Res.

A powerful file search utility...

FSearch can help you find files on your floppy disks or hard drives. It runs as a desk accessory or stand-alone program and has a built-in hypertext help system if *ST-Guide* is installed.

The program features three levels of complexity. In its most basic mode, it simply searches for files using the standard "?" and "*" wildcards. If you want to find all files starting with the word "TEST" and with the extension ".TXT", enter *TEST*.TXT* in the top line and click on Search.

FSearch can also look for text inside files. Say you want to find text files with the word "Atari" in them. Click on the Grep button and type "Atari" next to it. Click on Search to locate the files.

STDCRS

PD • J. Rodriguez • All Res.

Restore desktop colours...

Some badly-behaved programs have the annoying habit of messing up the desktop colours when you quit from them. But there is a cure – run this program, the *ST Desktop Colour Restorer*, a simple utility that restores the desktop to its original colours.

GENERAL DISK PROBLEMS

In the unlikely event that your cover disk won't load or gives you any other kind of problems, disconnect any peripherals, switch off your computer for at least 20 seconds and try again. If this doesn't solve the problem, return your disk, along with a stamped addressed envelope, to:

P.C Wise Ltd,
Dowlais Top Business Park,
Dowlais, Merthyr Tydfil,
Mid Glamorgan CF48 2YY.

PC Wise will test your disk and send a replacement as quickly as possible. You can also contact the PC Wise Helpline with any urgent problems concerning faulty disks on 0685 350505 between 10.30 am and 12.30pm, weekdays.

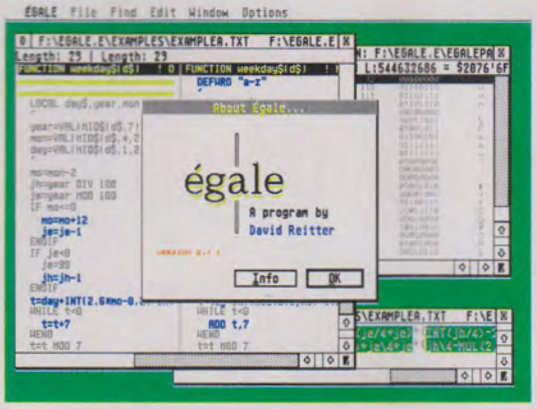
Should you require technical help, call the *ST Review Helpline* on Friday afternoon between 1pm and 4pm on 0625 859766.

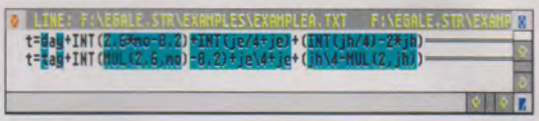
FIRST AMONG EQUALS

Égale is a powerful file editor and analysis tool. Joe Connor explores this special edition programmed exclusively for ST Review readers...

The word égale is derived from the French word for "equal", started life as a simple file comparison utility. The latest version adds the capability to analyse and edit files in ASCII, hexadecimal or binary and to print/save the results.

Although *égale* is undoubtedly a "serious" development tool, many of the features should appeal equally to mainstream Atarians. Make the most of our exclusive version and try *égale* for yourself! The enhanced GEM interface is intuitive and compatible with all Atari models, *MultiTOS*, *MagiC* and *Geneva*.





Égale can open up to 16 double windows, each capable of displaying two files side by side for easy comparison and editing in ASCII or binary mode.

Double clicking on a line displays the Single Line window which highlights differing characters. End of line markers show the trailing spaces.

TYPICAL USES

● *You find two identical filenames on different disks with the same size and date stamp, but how can you be certain they're exactly the same?*
Load the files in turn into *égale*. If they're identical, a confirmation dialogue box is displayed. You can either select other files to check, exit or continue and display the files.

● *As a programmer or author you update a file and then change your mind about some of the changes. Is there an alternative apart from reverting to your last saved version?*
Load the current and last saved version into *égale* and the differences between the two files are highlighted making it easy to review all the changes you're made.

● *If you're a programmer you'll know how easily bugs can escape even in a program you've already released! Something needs to be done and fast!*
égale can load the original and updated programs and, following a simple procedure, generate a compact patch program that can be distributed easily.

DOWN TO BUSINESS

One of *égale*'s most powerful features is the ability to "equalise" files. This aligns two similar files by inserting dummy lines into both files until identical areas are, as far as possible, matched up.

Take a look at figure 1. This screenshot shows two similar files displayed in a double window. Before carrying out the equalisation procedure, *égale* recognises lines 1 and 2 as identical but because line 3 differs, due to Insertion A, the rest of the file is considered different.

Figure 2 shows the result after equalisation. *égale* has correctly identified the inserted text lines A, B and C and re-aligned the text by inserting three dummy lines into the original text.

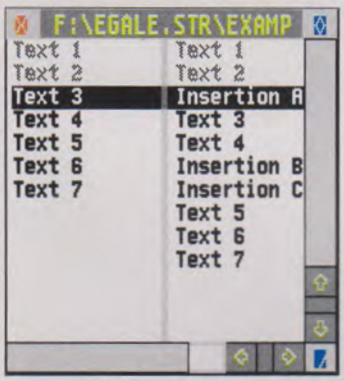


Figure 1: These two basically similar texts differ only because lines A, B and C have been inserted into the original text.

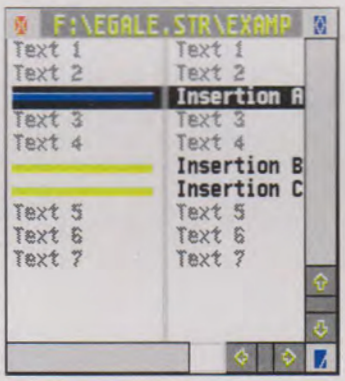


Figure 2: The files have been automatically equalised, with dummy lines inserted where necessary.

PATCH PROGRAMS

Patch programs are widely used by the on-line community to spread minor updates for programs. These usually take the form of a small program that modifies a particular file. Patches are a practical and cost-effective alternative to sending out a stream of new program versions each time a few minor bugs are reported.

The registered version of *égale* can generate "patch" programs capable of loading and modifying a specific file via the file selector. After checking that the loaded file exactly matches the original file, it's patched to make an exact clone of the "target" file.

After performing a patch, *égale* can be used to compare the "before" and "after" files to make absolutely sure they're identical.

MORE FOR LESS

If you find the Shareware version of *égale* useful, you should register to obtain the full package. This includes:

- Personal key to unlock the registered user-only features, including saving file segments, saving/printing differences (or similarities) between two files and generating patch programs.
- *ST-Guide* format context-sensitive on-line hypertext help.
- Master disk containing the registered version of *égale*.
- Printed quick reference guide.
- Access to UK support and update service.

Your personal key will also unlock future versions of *égale* at no extra cost. To register your copy in the UK fill in your details. Make a cheque or postal order for £10 payable to Joe Connor and send it to:

STR égale, Joe Connor, 65 Mill Road, Colchester, Essex CO4 5LJ

Please write clearly as your personal key is generated from your name and address details!

Please send me the registered version of *égale*. I enclose a cheque/postal order to the sum of £10 made payable to Joe Connor.

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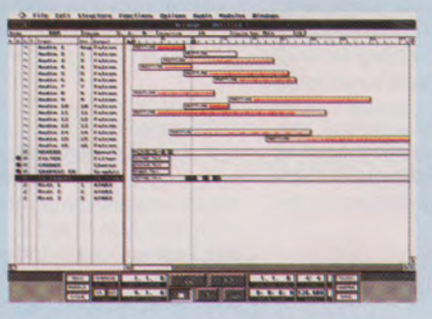

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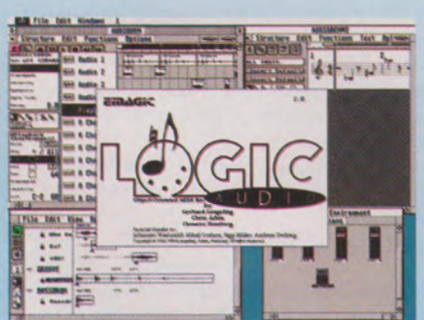

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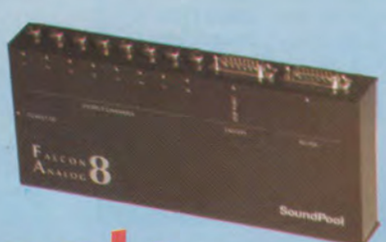

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NVDI v3.0 including 8 Speedo fonts	£49.95
100 TrueType fonts on disk	£39.95
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For update pricing, please phone.

NVDI v2.5 will continue to sell for only £29.95

Best Software Upgrade 1993 & 94 - ST Review.

MagiC

Runner Up Best Software Upgrade 1994 - ST Review.

"If you want a multitasking system that works simply and realiably, then MagiC is for you."
ST Review, June 1994.

MagiC is a full TOS replacement; a very fast disk filing system; has accelerated serial, midi and printing routines; and is, of course, a true pre-emptive multitasking system. **MagiC Desk**, a replacement Desktop and a powerful command shell are included. **MagiC** runs on all ST, Mega and TT computers with 512Kb, but 2Mb is recommended for a useful working system.

The Falcon version is expected later this year.

"It's like running an accelerator and getting the multitasking thrown in for free."
ST User, February 1994

MagiC	(RRP £69.95)	**Intro Price £59.95**
MagiC and Ease		£99.95
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NB: Excellent with Calamus SL. Compatible with Notator Logic, but not with Notator SL and not yet compatible with Cubase.

PAK68/3

Turn your computer into a 32bit system the the PAK68/3 using the 68030 processor. The 32MHz clock, 32bit wide TOS and a 32kbytes cache will accelerate your system by 775% (Gembench 3.10). This is faster than the Falcon and the TT! Clock speeds of 40 and 50Mhz are possible. The use of recycled processors makes this upgrade very affordable without sacrificing reliability.

A 32bit FastRam board and a colour graphic card adaptor are under development.

PAK68/3 board only, no CPU	£249.00
PAK68/3, 33MHz CPU, TOS2.06 req.	£299.00
PAK68/3, 33MHz CPU and TOS3.06	£359.00
PAK68/3, 33MHz CPU & FPU and TOS3.06	£399.00

Please telephone to discuss your requirements.

Kobold

This high Speed File Manager gives unbelieveable speed. Copies 1000 files (10Mb) in 45sec (GEMDOS 5:35min!). Use Kobold for backing up; formatting floppies (DD,HD,ED); move, copy and delete files; use the learn function to automate repetitive jobs. Ease calls Kobold automatically for all desktop file and floppy operations. Run as ACC or PRG

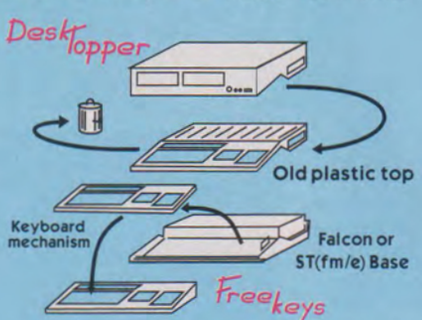
Kobold 2.5 (RRP £59.95) **Intro Price £49.95**

Ease

Use your Atari with EASE. Replace the old Atari Desktop. This program could not be more appropriately named. Right click replaces the double click. Iconize windows for instant access to groups of files. Ease is aware of multitasking and comes with a sophisticated Colour Icon Editor. Works on any ST, all TOS versions, and with any display and graphic card. **Price £49.95**

DeskTopper

No space for accelerators, TOS boards, hard disks, graphic cards and PC emulators? Convert your Atari into a desktop computer with more space. Simply replace your plastic top with the DeskTopper and fit your keyboard into FreeKeys (or replace with a PC Keyboard using AT-Key). For more information, ask for the DeskTopper leaflet.



DeskTopper - ST(FM/e)/Falcon	£69.95
FreeKeys	£39.95
AT-Key	£49.95
Cherry Keyboard	£29.95

T28 & T28e

Tired of waiting for your computer? Then speed it up with a 28Mhz processor. The T28 accelerator is now available for STe and STFM computers. Compatible with Cubase and Notator Logic.

T28 - with 64Kb cache for STFM/MegaST	£179.00
T28e - with 64Kb cache for STe	£199.00

Comming soon : The MultiBoard, a TOS2.06 IDE and graphic adaptor with 2-8Mb memory expansion.

SCSI Drives

Best Hard Drive 1994 - **ST Review Christmas '94**

MiniS hard drives are full SCSI systems, hardware compatible with all Atari, Amiga, Mac and PC computers. They are unrivalled in size, low noise, speed, and style.

The ST(FM/e) version comes with The Translator and a FREE copy of HD-Driver Software. Please add £20.00 if you prefer the ICD Link II adaptor.

Gold Award of 93% - **ST Format Feb. '94**

Essential Buy of 92% - **ST Review Christmas '93**

★ Quiet fan ★ Internal Power Supply 100-240V
★ 2 Year Warranty ★ Small (2.5x6x8.5") (WxHxD)
★ Dual SCSI Port ★ Device Number Switch

		TT/Falcon	ST(FM/e)
127Mb	Quantum	£209.00	£249.00
170Mb	Quantum	£259.00	£299.00
270Mb	Quantum	£289.00	£329.00
340Mb	Quantum	£319.00	£359.00
540Mb	Quantum	£389.00	£429.00
1Gb	Micropolis	£659.00	£699.00
1Gb AV	SPECIAL	£699.00	£739.00
1.7GbAV	Micropolis	£999.00	£1039.00
4.3GbAV	Micropolis	£2399.00	£2439.00

NEW MaxiS case - Takes two drives!! add £20.

CD-Roms

CD Rom drive systems complete with ExtenDOS,
for the Falcon with SCSI II Cable, or TT £289.00
for the ST(FM/e) with Translator £339.00

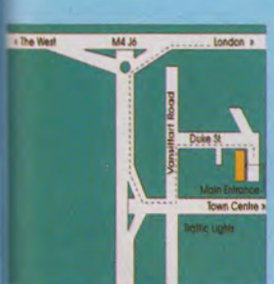
★ Multi-session Drive ★ Photo CD compatible
★ Double Speed ★ No caddies ★ Plays Music CDs
★ Dual SCSI port ★ Headphone socket with Volume control ★ Stereo Phono connectors

ExtenDOS v1.2x (CD-Rom Driver)	£29.95
ExtenDOS Pro v2 with music CD player	£39.95
NEW - Atari Mega Archive, Volume 1, Sept 94	
1.9 Gigabytes of Compressed Data (UK)	£24.95
Bernd Lohrum Vol 1 (German)	£24.95
Bernd Lohrum Vol 2 (German)	£24.95
Gemini (Atari PD/Shareware) (US)	£24.95
Clip Art Cornucopeia	£24.95
Clip Art Extravaganza	£49.95

SyQuest

NEW SyQuest removable media offers fast and secure storage. Ideal for backing up, or as a main drive. Imagine all your music files and software on one cartridge, and all your DTP files on another.

105Mb Drive, 14.5ms, inc. 1 cartridge	£399.00
270Mb Drive, 13.5ms, inc. Cartridge	£599.00
105Mb / 270Mb Cartridge	£54.95 / £69.95
128Mb Magneto Optical Drive	£699.00
230Mb Magneto Optical Drive	£799.00
128Mb / 230Mb MO Cartridge	£29.95 / £49.95



MAIL ORDER,
Windsor Business Centre
Vansittart Rd, Windsor, SL4 1SE
Fax: (01753) 830344
(01753) 832212

SHOWROOM,
17-19 Blackwater Street,
London, SE22 8RS
Fax: (0181) 693-6936
(0181) 693-3355

Prices include VAT and may change without notice - UK P&P £3.95 - Multiple or large items, add £10 courier. E&OE

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Call Windsor on (01753) 818816, or London on (0181) 693-1919.

ATARI WORKSHOP

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ATARI WORKSHOP

Happy New Year to all our customers

COMING

What does the future hold for your Atari in 1995? Nial Grimes digs out his crystal ball and hopes for more than a palm full of silver...

The ST is one of the most successful home computers ever produced. With over a million machines sold in the UK alone, and loyal users in almost every country, Fuji has made a mark that will not be erased easily.

However, Atari's recent shift in focus from its computer range to the Jaguar has left many people wondering if this really is the end of the road for the ST. Banish that thought from your mind – there's plenty of life left in the old dog yet and here are just a few of the reasons why...

IN BUSINESS

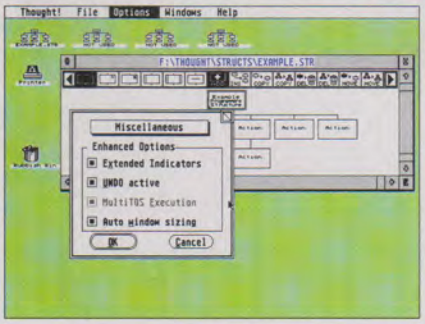
Atari business software has gone from strength to strength over the past few years and most of the major ST companies are either revising or releasing new professional programs.

HiSoft is one of the larger Atari supporters and has definite plans to continue development: "Atari software has been our main business for the past ten years – we have a very strong product line-up and fully intend to continue supporting the ST." *Papyrus* users can look forward to colour graphics support and a word counter in the very near future; a thesaurus is on the horizon too. *HiSoft* is particularly proud of the integration that can be achieved between *Twist* (a fast relational database) and *Papyrus*. Other projects that we are allowed to talk about include a voice-mail system for the Falcon (named *MasterPhone*) and a new GEM library for *HiSoft BASIC*.

Compo will be releasing *LDW Power 3*, a splendid spreadsheet with more than a few special tricks up its sleeve. Also along similar lines, *That's Write 4* is shaping up for a '95 release and will feature support for TrueType and PostScript fonts alongside "the most phenomenal table creator you have ever seen". *Write On 2* and *That's Address 2* will complement these heavyweights and both are looking good for the first quarter of the new year. David Link of HiSoft summed up the attitude of most Atari dealers in saying that the software appearing on the market now is of unrivalled quality: "*Twist 2* and *Papyrus* challenge many Macintosh packages and at affordable prices". Karl Brandt of System Solution backs this up by mentioning the humble memory requirements of even heavyweight ST word processors and desktop publishers.

On the DTP side, both *DA's Layout* and *Calamus SL* are due for an upgrade. *SL* will provide separation of spot colours, increased speed and a nifty new module that allows pages to be reorganised in thumbnail format. *DA's Layout*, on the other hand, will inherit colour PostScript import and a new stripped-down *Lite* version will be released at £99 "real soon now".

Improved speed and one or two extra modules should keep Calamus SL fans happy...



Organising your ideas will be even easier in 1995 thanks to Thought 2's drag and drop interface.

MAKIN' MOVIES

Many promises were made about the graphical power of the Falcon when it was released, and *Apex Media* is the program to justify many of these claims. Titan's David Encill explains that he is still "astounded" by the speed of *Apex* despite having worked with it throughout development. Yes, he would say that – but in this case, he is perfectly justified! The Exposé frame-grabber (now in production) has been developed alongside *Apex* and will allow you to grab footage from an incoming video signal.

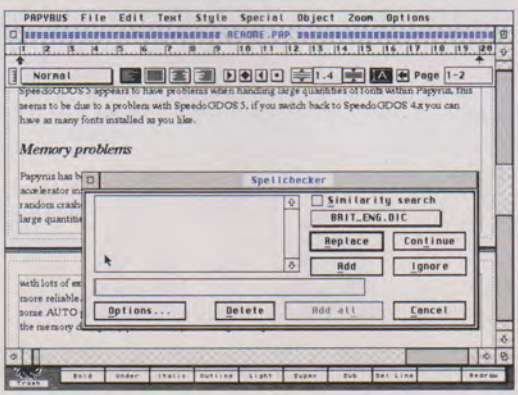
Another supremely innovative package ready to pounce on the market is *DA's Movie*. This is an extension to the *Vector* series and will offer movie editing, "*Adobe Premiere* style" (a top-flight Apple Macintosh program). CGS is being very tight-lipped about the exact specifications, but judging by Digital Arts' previous work it should be something to watch out for. Similarly exciting is the announcement of *Arabesque 2* from Compo – a colour vector art package that has been likened by many to *Corel Draw* on the PC.

A new version of *DA's Picture* is also waiting in the wings, boasting natural drawing tools and textures. Interestingly, drivers for pressure-sensitive Wacom graphics tablets are being developed to allow the careful use of these new facilities.

> ***Compo UK is just part of a world-wide company dedicated to supporting the ST and Falcon community.***
>
> *Neal O'nions, Compo.*

THE HARD LINE

Almost as much action is taking place in the hardware arena. System Solutions is busy taking the wraps off the first consignment of



Papyrus will inherit colour graphics support and a thesaurus at some point in 1995.

MAGICAL MYSTERY TOUR

MagiC was one of the best software releases of 1994 and the Behne brothers are not resting on their laurels. This year will see the arrival of Falcon *MagiC* and another version that will run on the Macintosh – yes, you will be able to use GEM applications alongside the likes of *Quark Xpress*, *Adobe Illustrator* and *Photoshop*!

Applications such as Calamus SL will soon be able to run alongside Quark Xpress, courtesy of MacMagic.

There's no news on the compatibility level just yet, but remember: the authors have built their reputation on the reliability of programs such as *NVDI* and the ST version of *MagiC*. Apple was running *MacMagiC* on its stand at the Frankfurt show and also had a huge display at ProTOS in November! Yes, Apple wants your soul! System Solutions will be handling distribution of all these products in the UK.

ATTRACTIONS!

STe-compatible T28 and T36 accelerator boards and the installation on these silicon rocket-ships is said to be a plug-and-play exercise.

And if your ST is already kitted out with an accelerator, you might be interested to hear about the expansion boards that will be hitting the UK before too long. Available for the T-series, these boards will offer an IDE hard disk interface, a TOS 2.06 slot and room for an accelerated graphics card. The new 50MHz Pak board is also worth looking out for. Described by Karl as "rock solid and significantly faster than a TT" it looks like just the ticket for desktop publishing and image retouching.

CGS Computerbild is another company with plenty to offer in 1995 and updates to the Janus ST emulator card certainly form part of its business plan. Before long you should be able to run ST software in a window on the PC – and better colour support is also on the way.

The cost of giving your Falcon a leg up in the resolution department will take a nose-dive this year too. ScreenBlaster Inside offers the same level of power as the regular version, yet costs only £39.95.

FUN 'N' GAMES

In the words of the classic advert: "it's not all work, work, work". There's plenty of entertainment software on the way to ease away the pressures of the daily grind. 16/32 has managed to secure the rights to twelve Falcon-specific games and these will begin to trickle out over the next few months. Titles in the pipeline include the excellent *Llamazap* by Jeff Minter, *Steel Talons*, *Dino Dudes* and many more besides. Some of these will actually be available by the time you read this article and most have received a very favourable response from visitors to the Atari shows. STe owners can look forward to *Zero-5*, *Obsession*, *Team*, *Stardust* and several other quality titles.

When questioned about his commitment to the Atari market, 16/32 boss Nick Harlow simply replied: "Atari products make up over 40% of my sales – why on earth should I even think about giving it up?!" Compo echoes the sentiment – its business spans most of the globe and it is "wholly committed" to the TOS market.

The overwhelming feeling you get from talking to dealers is that the decline in the Atari market is being vastly exaggerated. Even we were surprised by the vibrant level of activity going on, and simply have insufficient space to mention all of the exciting software and hardware developments in the pipeline! Sure, the ST will disappear from the computing scene one day – but it certainly won't be in 1995!

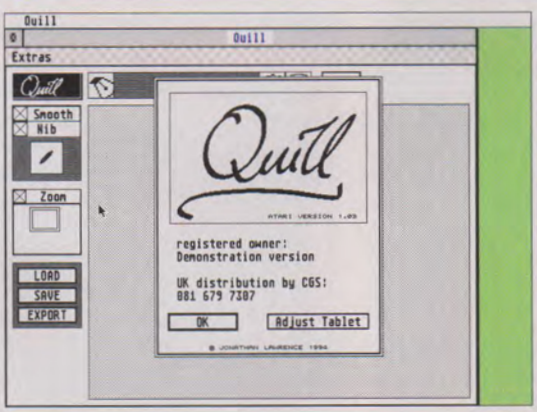
The long-lost Falcon games will finally surface in 1995 – Dino Dudes is a riot!

The true power of the STe is beginning to be exploited thanks to games such as Obsession.

> *We fully intend to support our existing customers and to bring new ST software to the market in 1995.*
>
> David Link, HiSoft.

COMPACT PRICING

CD-ROM has taken the PC world by storm and the trend looks set to spread to the ST at last. System Solutions will be announcing a competitively-priced SCSI CD-ROM bundle early in 1995, while Compo will be offering the CD-ROM ROM – a £79.95 cartridge that allows a huge range of PC-compatible drives to be connected to the ST. An introductory offer including a drive is available for £199.99. Gasteiner and Ladbroke Computing are also working on CD systems.



Many of CGS's programs will soon be able to benefit from the flexibility of a Wacom graphics tablet.

1995 RELEASE DIRECTORY

1995 is going to be one hot year for Atari software and hardware. Don't believe us – check out this little lot of new products, new versions and updates...

Compo: That's Address 2, That's Write 4, Write On 2, Arabesque 2, ScreenBlaster Inside, CD-ROM ROM.

HiSoft: MasterPhone, HiSoft BASIC GEM Library, Diamond Edge, Clarity Falcon, Papyrus.

Titan Designs: Thought 2, Dextrous, Apex Media, Exposé, Livewire (Jaguar game).

Ladbroke Computing: CD-ROM System.

Merlin: Obsession.

JCA Europe: Obsession, Calamus SL, Rainbow.

Gasteiner: CD-ROM System.

CGS Computerbild: DA's Movie, DA's Picture, Janus, Quill.

FaST Club: ImageCopy 3.5.

16/32 Systems: Llamazap, Dino Dudes, Steel Talons, various Lexicor products.

System Solutions: MacMagiC, Falcon MagiC, NVDI 3, T28/36 Multiboard, Pak/030 Buffer Board, FastRAM and Adaptor Cards, Midicom, ESCC (fast second serial port), ExtendDOS Pro, CD-ROM Bundle, MaxiS hard drive, Midiplayer Falcon

This is only a sample of the many products that will be available in 1995 – there are plenty that we aren't even allowed to mention! Bear in mind that some of the above goodies will not be available for a few months; contact the various suppliers for details.

PEAK PERFORMER

ESSENTIAL BUY

The long wait for a decent Falcon graphics program is finally over – and Andrew Wright gets to Apex first...

Few programs can have been as eagerly awaited as *Apex Media*. Ever since the Falcon was launched, owners – and prospective purchasers – have been looking around for some definitive software that would show off the machine's talents and let it live up to its personal multimedia system label. That software may have been a long time in the offing, but *Apex Media* certainly appears to fit the bill.

Apex is primarily an advanced animation tool with features that would normally require a suite of different programs. For instance, when creating a frame by frame animation, mixing live video and computer-generated images, most artists would need the services of other software such as image processing packages, morphing and paint programs. *Apex* has it all.

SOLID CORE

The program itself is a superbly efficient piece of code that takes up around 850Kb of hard disk space. It is divided into eight workstations, or modes, including drawing tools, cell tools, colour tools, video support, non-linear tools, processing tools, morphing engine and vector fonts.

Apex has its own video display code that bypasses the normal GEM routines and displays images and effects remarkably quickly. In fact, full advantage is taken of the Falcon's DSP chip wherever possible to speed up operations. Incidentally, this custom screen driver means the program can be launched from a monochrome display mode (such as 640 by 200 pixels), so freeing as much memory as possible for *Apex*.

The distortion option can lead to a less than flattering result!

Apex Media needs a Falcon with at least 4Mb of memory and a hard disk. A colour monitor, either RGB or VGA, is required too. Of course, 4Mb doesn't sound a lot when you consider how much space a true colour frame takes up but the program uses delta row compression to store only the pixels that have changed on successive frames. In theory, you could store up to 4,000 frames of animation in memory on a 14Mb Falcon, though in practice this figure will be much lower.

Compatibility is one of *Apex*'s strong points. For a program that does so much its own way, it behaves remarkably well with Falcon add-ons like screen expanders and multi-tasking operating system replacements like *MultiTOS*. You don't get a bigger screen with ScreenBlaster but you get smooth switching from the expanded desktop to *Apex*'s normal display mode. *Apex* also works well with *Outside*, the virtual RAM utility, allowing massive animations to be loaded.

The *Apex* package includes a number of small but very useful utilities. These include a CPX module to limit the amount of RAM the program grabs when multi-tasking and a CPX for compressing and decompressing JPEG files to or from GIF, Targa and PPM formats. Four viewers are included too, for Targa, GIF, JPEG and FLI/FLC animation files. These viewers can be installed as applications so that when you double-click, for example, on a Targa image, it will be displayed full-screen. A single keypress returns you to the desktop.

The Targa and JPEG viewers display images in true 24-bit colour within seconds, while the animation player plays direct from disk and is capable of playing animations running to tens of megabytes in size.

WHAT YOU SEE

For a program with so many features, *Apex* has a remarkably consistent user interface. At the top of the screen are the eight workstation icons. On the left are two toolboxes, the upper one changing to reflect whichever workstation mode is selected and the lower one providing tools that are permanently available. These include preferences, brush size, file loading and saving, screen resolution and the animation speed slider.

Along the very bottom of the screen is the current colour palette. This is present in true colour mode too, to make colours instantly

KEY FACTS

Product:
Apex Media

Company:
Titan Designs

Contact:
0121-414 1630

Price:
£119.95

SYSTEM

Minimum Memory:
4Mb

Resolution:
320 by 240, 640 by 200, 320 by 400 or 640 by 480 pixels. Virtual screen (2,048 by 1,024 pixels max) supported.

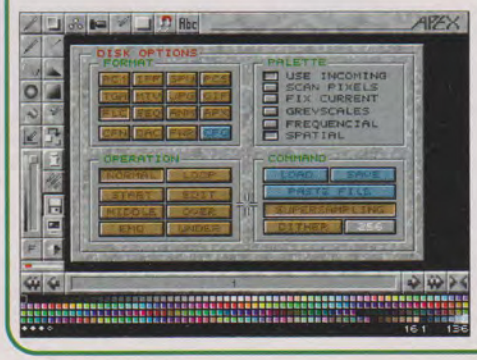
Computer:
Falcon030 with RGB or VGA monitor.

WHICH FILES?

Apex can load a variety of images, including Degas PI1, IFF, Spectrum 512, Photochrome, Targa, MTV raytrace, JPEG and GIF. TIFF support has been left out to save space but images can be saved in IFF, MTV, Targa and GIF formats only.

Blocks can also be saved in the program's own APX format which remembers position as well as pixel data. Colour palettes and morphing data can be saved too while animations can be stored in one of several FLIC formats derived from *Autodesk Animator* on the PC such as FLI and FLC. This includes FLH and FLT for true colour animations.

When loading images and animations, there are various options allowing small animated sequences to be placed (pasted) over (or under) existing animations.



Apex supports a number of import and export formats.

STEP BY STEP GUIDE

CHANGELING

Morphing is one of the most amusing and exciting tools in *Apex*...

***1** Load a source image into the first frame. Now click on the magnet icon to get to the morphing workstation and start to add the morphing lines. This can be done in zoom mode for pixel-perfect accuracy.*

***2** The target image is loaded into the final frame of the animation. Once all the morph lines have been placed on the source image, they have to be moved around on the target image to match.*

***3** Select the desired option. Metamorphosis is the usual morphing method where one image blends into another; distortion can make people change shape, size or do amusing things like grow large ears!*

***4** This 20-frame animation took less than 15 minutes to create. The middle image is shown with the source and target images blended in equal amounts. Apex is capable of stunning results...*

Analogue masking lets you change colours without altering the texture.

accessible. Just above the palette are the frame tools. With these you can insert frames before or after the current one, move one frame forward or backwards, or clear a frame. The slider bar in the centre lets you move to any frame in the animation.

The tiny red and white bar in the lower left shows free RAM while the button above it can show "F", "A" or "S". When "F" is selected, the current action applies to a single frame. When "A" is selected, it applies to all frames while "S" applies to a selection of frames. With this tool you can use filters over an entire animation and clear or remove frames you don't need. There are separate restore image and Undo features as well so you can work in absolute safety.

Apex works in 256 and true colour modes and four different screen resolutions. The default mode is 320 by 240 pixels on any monitor but this can be increased to 640 by 200, 320 by 400 and 640 by 480. Canvas sizes can be up to 2,048 by 1,024, making it possible to load and display large true colour images at professional resolutions (768 by 512) using this virtual screen approach.

Less memory is used in 256 colour modes and the program runs slightly faster but many tools, such as morphing and the non-linear tools, aren't available. In true colour mode, there is no limit on the size of the palette but memory requirements are much greater. The maximum screen size on a VGA monitor is 320 by 400 pixels.

Zoom and pan modes are well thought out and great fun to use. When using a virtual screen, the keypad is used to scroll around or the <spacebar> can be depressed and the mouse used. Images can be zoomed at ratios of 2:1, 4:1 and 8:1 using key presses and it is even possible to zoom in while drawing without affecting the stroke – or even while playing an animation!

Everything about *Apex* is lightning fast and even true colour animations can be played at a reasonable speed. If you've seen the screen redraw speeds of programs like *Studio Photo* and even *DA's Picture*, you'll be amazed when you see *Apex* in operation. Even scrolling around a large canvas or zooming in on a true colour image can be done in real time with no lag at all.

It's not only the screen display that's fast either. Every single action has one or more intelligently chosen keyboard shortcuts. Many have two to cater for left-handed users and those wanting to use both mouse and keyboard, with the result that most complex operations can be carried out extremely quickly.

SUMMARY

GOOD POINTS:
Superb all-in-one interface
High speed operation
Excellent manual and tutorials
Good digitiser support

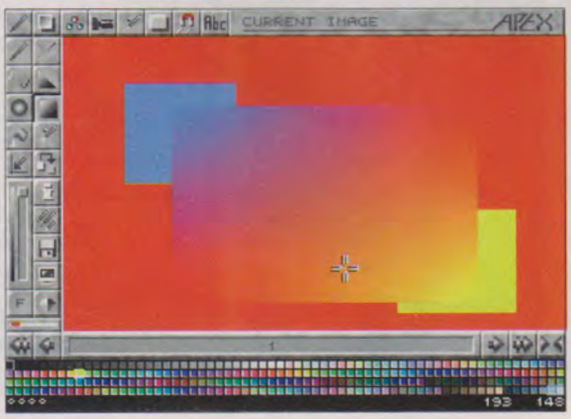
BAD POINTS:
None at all

FINAL WORD:
"If Falcons could dream, they'd dream about Apex Media!"

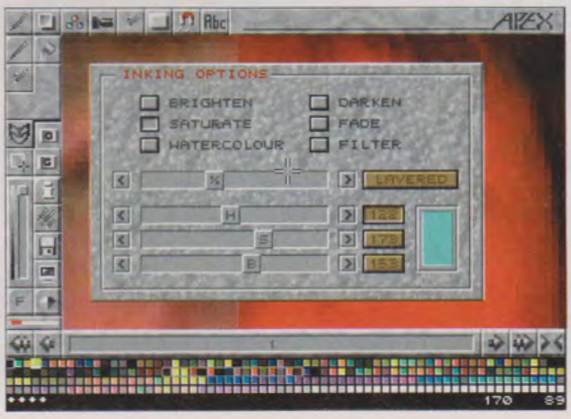
CREATING IMAGES

The object of *Apex* is to create animations. They can either be imported via the media engine, digitised using either the Exposé or Matrix Screeneye boards or created from scratch using the powerful drawing tools.

Although not designed as a paint program, *Apex* has many such ➢



Interpolation at work – the gradient reflects the underlying colours.



Used with masking, the ink options are powerful retouching tools.

features. There are freehand drawing and line tools and another for creating one of four types of curve including *Bézier*, B Curve, B Spline and Polyspline. Circles, ovals, rectangles and squares can be created and can have various properties, including gradient fill, solid fill and wireframe.

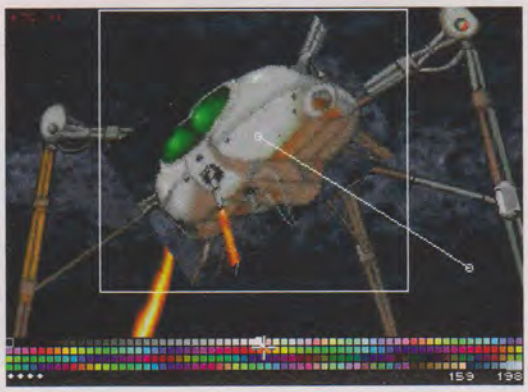
The brush can have one of sixteen shapes and sizes, and up to four blocks can be cut and used as custom brushes – useful for image retouching. There is also a standard airbrush, in addition to the realistic airbrush in the non-linear tools workstation, with configurable size and flow rate.

One unique setting is "interpolative" and this can be used for lines, squares and polygons. Whenever an interpolative shape or line is drawn, each corner or end will pick up the foreground colour beneath it and create a gradient towards the other corners or ends. This means that it is possible to create filled shapes with multiple gradients.

The vector font workstation uses *Calamus*-format outline fonts to create bitmapped text on screen which can then be altered and edited, like any other graphic, and given attributes like gradient fills. To manipulate the images and to create image blocks for use as sprites or cells in the animations, a range of manipulation tools is supplied. These include manual cut, which allows you to cut a section using crosshairs, and automatic cut, which grabs the whole screen minus the background colour. The background colour can be turned off when pasting irregular shapes, so making it easy to superimpose cells on top of backgrounds.

Cells can also be inverted, rotated in any axis, given a perspective and rescaled in real time using the mouse. One neat touch is the ability to remap the palette of a cell to the image on which it is superimposed.

This is only valid in 256 colour mode, of course, and it relies on intelligent routines in the program to choose the best common palette.



Real time block manipulation – an interesting feature.

DIGITISING

Apex includes built-in support for two high quality video digitising cards, the Matrix Screeneye, available from Compo, and Exposé from Titan Designs. The program automatically recognises which one is installed.

Using these cards, _Apex_ can grab low resolution video sequences straight into consecutive frames or grab high resolution stills with startling clarity. The number of frames you can grab depends on memory and the amount of compression possible. The size and resolution of the images that can be grabbed depends on the digitiser itself but, in general, _Apex_ scales down the image to fit the canvas size using software supersampling.

The image can be monitored in a small box on a corner of the screen (the "PIP" camera) at the same time as the still image is being displayed in the main window. _Apex_ also provides options for five different shutter speeds (giving better quality images provided the picture is kept perfectly still) and widescreen formats.

Both cards require some experimentation to get the right settings as _Apex_ has a number of options for different scaling techniques and aspect ratios.

FULL COLOUR

The non-linear tools are exclusively for true colour mode and are mainly aimed at retouching or creating special effects. They include analogue masking and the effects can be applied to a specified area or selected frames. The analogue masking uses the Hue-Saturation-Brightness colour model and it can be used to do things like change people's faces from pink to green, for example, or alter a car from red to blue without affecting the background or any other colours.

The colour workstation is for altering, editing and otherwise tweaking the colour palette. On entering this mode a special dialogue box appears under the menu bar. It is a passive dialogue in that it remains there while other tools are accessed and it offers three different colour models: RGB (red-green-blue), HSB (hue-saturation-brightness) and CMY (cyan-magenta-yellow).

Once you have an animation or sequence of digitised video put together you can apply a selection of filters over all or part of the screen and over as many frames as you like. The first filter is a simple noise suppression filter that tries to compensate for the vagaries of the digitising process, stripping out spurious pixels not relating to their neighbours. The motion suppression

MATRIX SCREENEYE

Maurice Collins examines Compo's digitiser card...

KEY FACTS

Product:
Matrix Screeneye
Company:
Compo Software
Contact:
01487 773582
Price:
£249

SYSTEM
Minimum Memory:
4Mb
Resolution:
180 by 144 or 360 by 288 pixels real-time; 720 by 576 (max) still
Computer:
Falcon030 with RGB or VGA monitor

The Matrix Screeneye card is a compact three-inch long board that fits snugly into the Falcon's internal expansion slot. This requires removal of the case but it fits back on again without difficulty and the metal shielding can remain in place. A lead from the card runs through the Falcon's cartridge port and ends in a standard phono-type connector that can be plugged directly into the composite video out socket of a camcorder or VCR.

The supplied software is poorly translated but it works very well nonetheless. It consists of a small Auto folder driver and either an accessory or program for viewing the picture. If you use the accessory version with a large true colour screen, you can watch live TV or a video while working on the desktop. In 256 colour mode, the motion video is displayed in greyscales.

The real-time screen image is displayed crisply and cleanly in full colour at 180 by 144 pixel resolution and sequences of this size can be displayed and grabbed at 25 frames per second (fps). Although it is possible to double the size to 360 by 288, the display rate drops to 6 fps.

With Matrix Screeneye installed, Apex shows live video in one window and grabs in another.

A full screen grab – pretty good quality, eh...

Still images can be grabbed at up to 720 by 576 pixel resolution (*Apex* has to have a large canvas to do this) and saved as 24-bit images. The dedicated Screeneye software will save images in TIFF, JPEG or Targa formats while *Apex* will save as either Targa or GIF.

Screeneye treats colour and greyscale information slightly differently. Colour information is sampled at relatively low resolution so that many images appear to have brightly coloured ghosting effects, particularly on faces. The images also tend to be over-saturated, particularly with respect to red, and are slightly compressed horizontally. Despite these niggles though, Screeneye is still an effective, tried and tested digitising solution.

Various creative fill options are possible.

filter dramatically compresses animations by removing noise and some of the more minor movements. Although the quality drops off quite considerably, the high level of compression is a big benefit.

Images – or better still, parts of images – can be processed using the dejag filter which removes pixelated edges that are often seen in low resolution digitised clips.

Finally there is animation blur, a special effects-style filter for creating the illusion of rapid movement or improving the apparent resolution of morphing animations.

VERDICT

Even with a four-page review, I've only managed to skim the surface of *Apex*. Such is the depth of this superb program that it'll take many months before all of its secrets come to light. The interface might annoy GEM purists but it is a real joy in day-to-day use and its turn of speed will leave you gasping, particularly when manipulating cells in real time and other DSP-assisted operations.

Apex is surprisingly well priced for a package of this calibre and it comes with a superb, well-written manual with plenty of tutorial space. In all the months I've been using it, it has never crashed or misbehaved, even in the many beta versions.

There's very little software of this quality on any computer platform and *Apex* should give the Falcon the massive boost that it so desperately needs. It's here, it's stable and it's utterly brilliant. What more can I say? Buy it!

PERFORMANCE	OVERALL
EASE OF USE ✔✔✔✔✔✔✔✔✔	95%
DOCUMENTATION ✔✔✔✔✔✔✔✔✔	
EFFECTIVENESS ✔✔✔✔✔✔✔✔✔	
VALUE FOR MONEY ✔✔✔✔✔✔✔✔	

Screeneye's own software allows desk accessory operation of real-time video!

A typical image grabbed with Screeneye and Apex.

PERFORMANCE	OVERALL
EASE OF USE ✔✔✔✔✔✔✔✔✔	83%
DOCUMENTATION ✔✔✔✔✔✔	
EFFECTIVENESS ✔✔✔✔✔✔✔✔✔	
VALUE FOR MONEY ✔✔✔✔✔✔✔	

Exposé in action.

EXPOSÉ

A sneak preview of Titan Design's Exposé digitiser...

Exposé was designed in the UK and has only just started production. We were provided with a pre-production model for this preview, consisting of two boards. One fits into the Falcon's expansion slot and the other fits on top of this, piggyback fashion, so preventing the top of the case from being replaced. A lead from the board runs to a temporary RGB splitter housed in a plastic case and powered by an external mains adapter.

According to Titan Designs, the production model will be a single board that will fit comfortably inside the case but there will still be an external splitter with contrast and colour control dials, enabling much more control over the final image than with the Matrix card.

The other technical advantage Exposé has is the 512Kb of static RAM on the board to allow faster data transfer, although we could see no real difference between Screeneye and Exposé in the configurations tested.

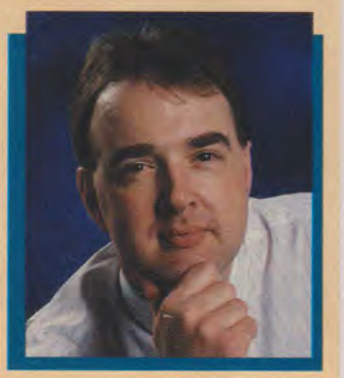
Exposé can grab still frames in 24-bit colour at sizes up to 512 by 320 pixels but it can also grab sequences of these images at 6 fps and 16-bit colour. Other supported resolutions are 256 by 160 pixels at 17 fps and 128 by 60 pixels at 25 fps. In theory, these resolutions are inferior to those of Screeneye but although the images are smaller, the effective resolution should be higher and there should be a better overall colour balance. Little of this could be seen on the pre-production model due to a rather flaky splitter but, all being well, the finished product should have a lot of potential.

Exposé should be available soon and is expected to be bundled with a cut-down version of *Apex* for around £299 or the full version for £399.

An image grabbed using Exposé and Apex.

WRIGHT ISSUES

Stuck in the 'Net...



Where on earth is home computing going? It looks to me as if we've lost our way – and at the same time lost sight of what computers are good for and what they should leave well alone.

When the desktop publishing revolution arrived, computers could suddenly achieve things we'd never dreamed of before. Let's face it, we got carried away. That's not to say that the DTP revolution was a bad thing. DTP is well within the brief of a home computer and a cheap printer. Unfortunately the DTP revolution gave way to the multimedia one and all of a sudden things looked a little less certain. Now the so-called information superhighway has arrived and already people with nothing better to do are talking about multimedia on the Internet.

What is becoming clearer to me every day is that multimedia doesn't even deserve a name of its own. It's nothing more than the result of improvements in computer sound and graphics. It isn't the be all and end all of twentieth century existence that it has been cracked up to be.

Two or three years after it was originally suggested that the TV, video, telecoms and computer industries would merge into one all-singing, all-dancing source of information and entertainment, we're still no nearer. According to a recent report from the SRI International Institute, there's no evidence that it will ever happen. The information superhighway, it says, is all hype. Oddly enough, the SRI report coincides with another from market researchers Inteco that questioned 11,500 people all over Europe and concluded that the concept won't materialise until at least the next millennium.

Heaven knows how many people have gone out and bought expensive computers thinking they would keep up with multimedia technology and get on the Internet. I was on an advice stand at the Live '94 show recently and that was all Joe Public wanted to do – largely due to an optimistic article in the Sunday Times the weekend before, I might add.

Have you actually tried getting on the Internet? It's the biggest con going. You need a degree in Egyptology just to get to first base and a mind like a Cray supercomputer to work out what to do with it! Even when you manage to get where you want to be, the world and his dog are there at the same time so the whole thing appears to slow down to a crawl.

It's a classic case of technology being way behind. The right access tools just don't exist for most people – especially Atari users. We might get up to speed one day but at the moment the so-called superhighway is just an overgrown footpath. Keep off it.

Andrew Wright is a freelance writer for various magazines and has been with *ST Review* since its inception. Rumour has it he's just sore that nobody will give him a free *Internet* account...

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All disks are £1.25 each

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DC002
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Outrageous Fortune, Match 2, Cryptogram, Frame of Mind are on this one.

DC004
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MACATAK

Is MagiCMac the saviour of Atari software? Sure looks that way, as Ofir Gal and Vic Lennard find out...

MagiCMac is the most surprising development ever in the world of Atari software. While the Falcon is a great machine, a faster and improved model bearing the Atari logo now appears to be out of the question. Earlier this year, two hardware solutions were announced. The Medusa and Eagle are TT-compatible machines boasting powerful 68040 processors and promising great speed and flexible video – but at totally prohibitive prices. Two Atari emulators for the PC have also been launched, but both fail to give an improved environment to work in.

ABRACADABRA

The Apple Mac is much closer in design to the ST than the PC. It uses the same processor family, so simplifying the design of an Atari emulator. Yet, such an emulator has failed to materialise – until now.

Two months ago, *ST Review* mentioned that Application Systems Heidelberg and 2B (the company behind *NVDI* and *MagiC*) were working on a Mac-compatible version of *MagiC*. We finally obtained a copy at the German ProTOS Show towards the end of November.

The first reaction is one of sheer amazement. Not only does *MagiCMac* work, it simply flies! We've never seen any Atari computer run so fast with the possible exception of the Medusa. The system comes with the *Ease* desktop pre-installed and runs in glorious 256 colours, making full use of the Mac's advanced video.

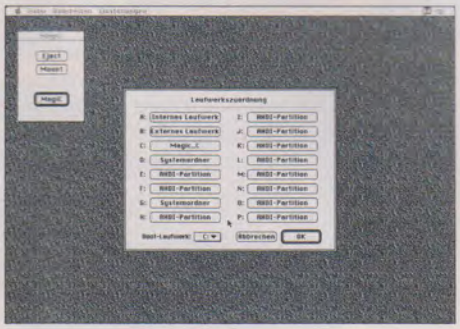
MagiCMac comes on a single high-density disk containing two files. Installation is simply a case of double-clicking on the *Installer* file. Setting up TOS hard disk partitions is unbelievably simple: just create a Mac folder for each partition you require without any need to reformat or partition the Mac drive. *MagiCMac* shares the hard disk with the Mac's own System 7 operating system – you can even plug in an Atari formatted SCSI drive and read it directly.

On running for the first time, you're prompted to select the boot "drive" (folder) and configure any additional folders. Following that, the screen goes white for a couple of seconds and the Mac becomes a graphically-enhanced Atari ST with *Ease* installed.

MULTI-TASKING

MagiC is a pre-emptive multi-tasking system that allows you to run up to 20 programs (memory permitting) at the same time, setting one to carry out a background task, such as zipping a file or printing, while using another. With the incredible power of a modern Mac, multi-tasking is a highly useable facility even on a budget LC475 which sports a 25MHz 68040 processor.

While the Mac desktop and any other active programs disappear from view while *MagiCMac* is on-screen, they can still continue to run. As far as the Mac operating system is concerned, *MagiCMac* is just another application, irrespective of any ST programs that are running. In fact, a fax was received using a Mac program while typing this preview in *Papyrus* without any noticeable slowdown or side effects. A simple keyboard shortcut allows you to switch between *MagiCMac* and the Mac desktop.



"Partitioning" the Mac's drive is simply a matter of selecting which folders you want MagiCMac to see. The Mac can continue to use the same folders as well.

GOOD OR WHAT!

On a Quadra 800, *GEMBench* results show that the Mac runs about three times TT speed – some 14 times faster than an ST! Even a bottom-of-the-range LC475 is around 10 times faster than an ST. These results were obtained in mono, but the real beauty of the Mac hardware is that running in colour has very little effect on performance, unlike the Falcon.

The Mac modem port can work with ST comms software at speeds of up to 57,600 baud and *MagiCMac*, along with a special version of *NVDI*, will be able to print to any Apple-compatible printer. Memory requirements are pretty low (less than 1Mb) but System 7 requires at least 2Mb itself, so an 8Mb Mac will give you about 5Mb of memory for ST programs. Even the Mac's built-in virtual memory driver is supported! Sound compatibility only goes as far as keyboard clicks and beeps, but with more promised in future versions. System Solutions should have release versions by the end of January 1995.

As for compatibility, most "well behaved" GEM programs work, including *Papyrus*, *Connect*, *Calamus SL*, *Everest*, *STZip*, *LHARC*, *GEMView*, *ST-Guide* and *Interface*. Many other programs will only need minor tweaks to make them compatible.

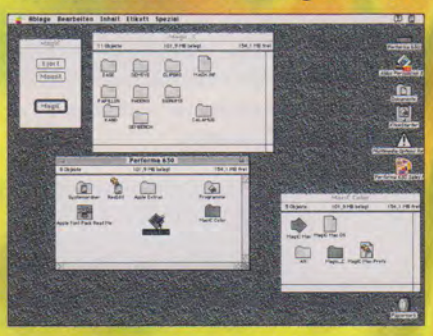
FINAL WORD

MagiCMac is a significant breakthrough for ST and Falcon owners who want to upgrade. You get to keep your GEM applications, explore the more expensive Mac programs and even run a DOS emulator at a half decent speed. An LC475 with 8Mb of RAM, a 14" monitor and a 250Mb hard disk costs around £1,000 and there is a lively second-hand market where £500 can buy a system that is much faster than a TT. The future has finally arrived...

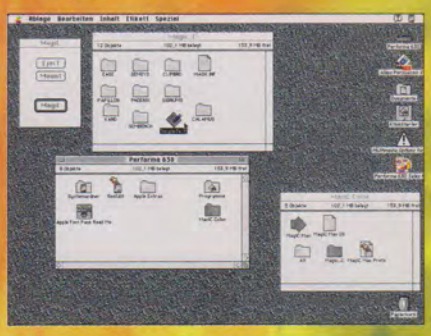
STEP BY STEP GUIDE

GET MOVIN'

Need to read a Mac file in *MagiCMac*? Just grab 'n' slide...



1 ***Grab a file in a Mac folder, here from "Performa 630"...***



2 ***... and drag it over to one of MagiCMac's designated folders.***

3 ***Switch to MagiCMac and there it is – happily sitting at Ease...***

IN PUBLIC

The secret of success...

The general public have a rotten reputation when it comes to buying electronic equipment. It all began back in the early days of video cassette recorders. The simple decision was between the compact – and technically superior – Betamax format, or the unwieldy VHS alternative. Needless to say, VHS pulled through and things have just headed on downhill from that point.

The situation is even sillier where personal computers are involved. It's fairly easy to see why people buy PCs these days, but remember – clones became successful when all they could offer was laughable four-colour graphics and nothing more than a beep for sound! The ST and Amiga were available at that time, yet people descended on Dixons and Curries in their droves to buy anything but "the next generation". Even the law of averages can do nothing about the general public's uncanny ability to completely ignore innovation.

It's almost as though one person is behind the whole "general public" movement – a huge *Forrest Gump*-type creature running in reverse; "Oh yes – I'll take that VHS video recorder and give me a box of those lovely bendy 5 1/4 inch disks while you're at it." History is littered with examples of good products that have bombed and naff designs that have done really well. Thankfully, the floppy floppy-disk is a phenomenon that didn't reach the ST.

And is there any sign of things getting better? Nope – even a product as strong as the Falcon didn't tempt buyers away from buying the technically inferior Amiga 1200, and to top it all the company went broke; a bulls-eye situation as far as the "general public" are concerned.

The syndrome even extends itself to whole corporations. Who'd have thought that Atari, the ruling king of the video games industry, could have lost its empire in the mid-'80s? And yet lose it did, to two relatively inexperienced (as far as consoles were concerned) Japanese companies. It stings the analysts every time and will continue to do so until somebody realises that the only thing more mysterious than the computer industry is the success of the *Village People*!

And what can we draw from the above scenario? Well, it is easy to see why the Jaguar will become a huge success. Sure, the sensational hardware spec is a big black mark, but Atari's relative insignificance when compared to Sega and Nintendo must place Fuji in a strong position. Remember the golden rule: don't write anything off in the computing industry unless it's a sure-fire success...

Nial Grimes is a freelance journalist and fully paid-up member of the general public. He owns the world's largest collection of 5 1/4" floppy disks has never owned a Betamax video recorder...

You get what you pay for...

TECH TALK

I've taken the plunge and bought an Apple Mac. No, I am not about to desert my beloved Falcon, but rather expand my knowledge of computers – and has it been an education! I had to learn all about screen resolutions that are measured by monitor sizes instead of pixels and how to automatically add VAT to every advertised price!

With *MagICMac* on the horizon I decided that as Atari appears unlikely to produce any new hardware in the near future, a powerful Mac would allow me to run all my favourite GEM programs while benefiting from the faster hardware and professional applications like *Photoshop*.

My first discovery was that Apple computers are not as cheap as one might be led to believe – Atari computers are much cheaper to buy and use. Apple certainly produce powerful hardware, but then the operating system needs all the power it can get – it is slow! *System 7.5* takes almost an hour to install in full, and even if you just install the basic system you can wave goodbye to more than 2Mb of RAM and over 10Mb of disk space. *System 7.5* costs around £80 but includes a nice desktop, CD-ROM drivers, an advanced file search utility, a scripting language and much more.

The Apple philosophy of hiding the system from the user is in evidence everywhere. This is both good and bad. First-time users can easily find their way around because everything is displayed with icons and colourful help boxes. More advanced users may find this "nanny" attitude a little annoying.

Connecting an off-the-shelf SVGA monitor is possible, but not as simple as it should be, and even then the choice of screen resolutions is rather limited – frustrating when you know that the hardware is capable of much more.

Programs for the Mac are very good, but with prices to match which makes sense. *Photoshop*, which was top of my shopping list, costs more than £500. But you get a truly professional system for your money that puts similar Atari programs to shame. There is also an astounding choice of shareware, but all my attempts to find an equal to *Connect* on the Falcon have so far failed. The same goes for utilities, where you simply have to go commercial in most cases. Even a converter to allow me to connect my DeskJet 520 to the Mac costs more than £100! The Apple Mac is a professional's machine where you pay good money for quality programs. My initial impression is that while the Mac is a powerful platform, the ST and Falcon still have their advantages – especially for someone on a tight budget.

Ofir Gal has been writing for *ST Review* for over two years and is the magazine's technical voice. And has the purchase of a Mac improved his tardiness in presenting articles on time? Has it hell...

STYLISH STYLUS

Andrew Wright immerses himself in near-photographic quality colour printing with Epson's new inkjet printer...

Epson believes that by 1995, sales of colour inkjets will be almost equal to those of the mono variety as more and more computer users start using colour in documents and presentations. Not surprisingly, Epson wants a slice of that market and the Stylus Color is the company's answer to the ubiquitous DeskJet.

The printer's main claim to fame is an amazing 720dpi resolution in full colour mode that comfortably outclasses the DeskJet's 300dpi. This delivers absolutely stunning images that are very close to photographic quality, though specially coated paper is required at maximum resolution. At 360dpi, on special paper or plain paper, the images are still superb and similar to, if not slightly better, than those produced by the colour DeskJet.

Serious contender – no other comparable printer comes close in terms of colour output...

Happily, there's little reason to be frightened off by the mention of special paper. The 360dpi paper costs around £22 for 200 sheets (11p a sheet) while the 720dpi variety weighs in at £26 (13p a sheet). Ink cartridges are a little on the expensive side, with the mono cartridge costing around £19 and colour around £41.

According to Epson, you'll get 840 sheets out of each mono cartridge when printing pure text and around 670 from a colour cartridge when using colour text and simple graphics. Printing images uses up more ink, especially at the higher resolution, but having tested this printer with virtually all of my favourite images, not to mention repeated attempts to fine tune the colour balance and ink density, there's no sign of the cartridge running out.

As for the cost, Epson's RRP is £656.82 but with some careful shopping around you should be able to find it for under £400. This includes a two-year warranty.

KEY FACTS

Product:
Stylus Color
Company:
Epson
Contact:
0800 289622
Price:
£656.82

SYSTEM
Minimum Memory:
0.5Mb
Resolution:
Any
Computer:
Any

WHAT YOU GET

The Stylus has a footprint measuring 470mm by 338mm and standing 190mm high. The front loading paper tray sticks out 160mm or so and holds up to 100 sheets of A4, 50 transparencies or 10 envelopes.

It's a well designed and user-friendly with a simple five button control panel and no confusing dip switches. The Stylus has five internal letter quality (360dpi) bitmap fonts including proportional versions of Roman and Sans Serif, Courier, Prestige and Script. There are also four typefaces, Roman, Roman T (Times), Sans Serif and Sans Serif H (Helvetica), that can be selected in any point size between 8 and 32 in two-point increments. Epson calls these fonts "scalable" but it does seem to stretch the meaning of the word slightly. In any case, you'll need special Esc/P2 printer drivers to access them and, at present, only *Protext* and *That's Write* can oblige.

If you've looked through your favourite program's printer drivers and discovered that the Stylus is conspicuous by its absence, it will also emulate many Epson 24-pin printers, in colour or mono, though not at 720dpi. Decent output can be obtained using these in programs like *Pagestream* and *Papyrus*. Most word processors with 24-pin printer drivers can print in black and white and the internal fonts can be selected from the control panel. ASCII dumps from the desktop are also supported.

The only true Epson 720dpi support at present comes from the latest version of the excellent *Imagecopy*. Most of the printer testing was done using *Imagecopy 3.5* – check the full review on page 28.

VERDICT

While the quality of the Stylus's plain black text output seems to be slightly behind the DeskJet, it is certainly better than any dot matrix printer. However, it's the colour capabilities that set it aside from the crowd. In short, the Stylus offers the nearest thing that most of us will ever get to photographic quality this side of £3,000...

Take a decent PhotoCD pic and output at 720dpi onto special paper via Imagecopy 3.5 – the result is simply stunning...

PERFORMANCE	OVERALL
EASE OF USE ✔✔✔✔✔✔✔✔✔	88%
DOCUMENTATION ✔✔✔✔✔✔✔✔✔	
EFFECTIVENESS ✔✔✔✔✔✔✔✔	
VALUE FOR MONEY ✔✔✔✔✔✔✔✔✔	

A NEW IMAGE

Is it possible to improve the best image conversion program ever? Andrew Wright finds out...

One of the Atari's best known graphics utilities has just had a major upgrade. *Imagecopy 3.5* adds a whole new range of extras from the pop-up menu offering flip, rotate and zoom to new graphics formats, thumbnail display of images and improved output options. There's also a PhotoCD version, *3.5CD*, that can do some unique tricks with Kodak's high-quality photo format.

WHAT IS IMAGECOPY?

For those of you who have never come across *Imagecopy* before, it is a much admired image conversion, printing and screen grabbing utility that runs as a desk accessory or stand-alone program. It has an easy-to-use interface and supports most popular makes of mono and colour printer, providing a high degree of control over many aspects of output, and has extensive support for various graphics file formats.

Imagecopy does a number of jobs. First of all it's an essential tool for colour printer owners who want to get the best possible output quality with the least amount of fuss. It's also an indispensable program for desktop publishers who come up against a wide range of image file formats and need to convert them to something their main application can read.

With the new thumbnail option it is also superb for cataloguing photographic images and clipart. Last but not least, of course, it is used extensively here at *ST Review* to take screenshots of software, something at which it excels.

KEY FACTS

Product:
Imagecopy 3.5

Company:
FaST Club

Contact:
0602 410255

Price:
£29.95 (£39.95 for CD version)

SYSTEM

Minimum Memory:
0.5Mb

Resolution:
Any

Computer:
Any

A catalogue produced by Imagecopy and saved as a TIFF.

WHAT'S ON OFFER?

The program comes in a three-disk set with a perfect-bound 90-page manual and 28-page addendum covering the new features. The first disk contains the main program, which can be renamed as an accessory if needed. Also on the disk is a cut-down version, without JPEG support, that takes up less memory. The second and third disks contain a range of sample images, mainly in JPEG format.

Imagecopy 3.5 can load and view a large number of graphics files, including almost all of the Atari-specific formats you can name: Degas, Tiny, NEO, Spectrum, IMG, XIMG, Art Director, Calamus Raster Graphics (CRG), Doodle/PIC (*Pixart*'s proprietary format), RSC, *TruePaint* (TPI), *Prism Paint* (PNT) and XGA from the Atari slideshow program. Other formats from different computer systems include PCX, GIF, IFF, TIFF, BMP (*Windows* and *OS/2*), Pictor (PIC), *Macpaint*, Portable Bitmap, Targa, JFIF/JPEG and Sun Raster files.

There are several options for many of the file formats. GIF files can be saved with any number of colour bits from one to eight and mapped to the current palette, while TIFF files can be saved uncompressed or with run length encoding or LZW compression, again with any number of colour bits from 1 to 24. Any JPEG compression ration between 1 and 100 can be specified too, although the best setting will inevitably be somewhere between 75 and 95. There is also an Auto folder program

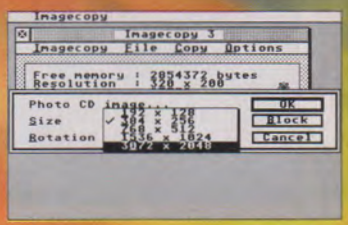
STEP BY STEP GUIDE

GO WITH THE PRO

PhotoCD is Kodak's proprietary system for developing film directly to a highly compressed digitised image format stored on a standard compact disc or CD. The **.PCD* files on the disc can be accessed at any one of five resolutions: 192 by 128 (wallet), 384 by 256 (snapshot), 768 by 512 (standard or base), 1536 by 1024 (large) and 3072 by 2048 pixels (poster). These images take up roughly 74Kb, 295Kb, 1.3Mb, 4.7Mb and 18.9Mb respectively – a 4Mb Falcon is limited to 768 by 512 and even 14Mb machines can't load the highest resolution images.

Kodak has also released a Pro PhotoCD format (4096 by 6144 pixels) but as these produce images of around 72Mb, it's unlikely to be seen on the Atari in the near future!

There is a PhotoCD-compatible version of *Imagecopy* called 3.5CD that will load PhotoCD images and save them if needed. It's £10 more expensive, though, owing to the extra royalties that have to paid to Kodak for use of the format. This program has a neat little trick up its sleeve: it allows you to load a portion of an image at its highest resolution. This way you can zoom in on parts of a PhotoCD image and cut it out for use elsewhere.



1 ***When Imagecopy is asked to view the file, it spots that it is a PhotoCD image and offers a choice of resolutions.***

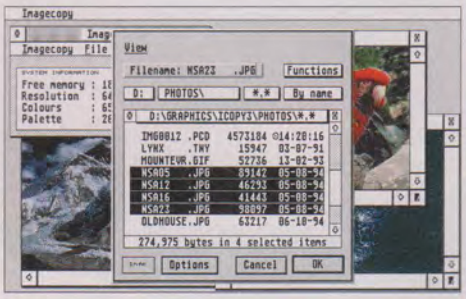
2 ***Let's work with this PhotoCD image which will be available in the five different resolutions mentioned.***

GOING IN TWO BY TWO

One particularly nice feature (though not a new one) is that multiple files can be loaded using two different methods.

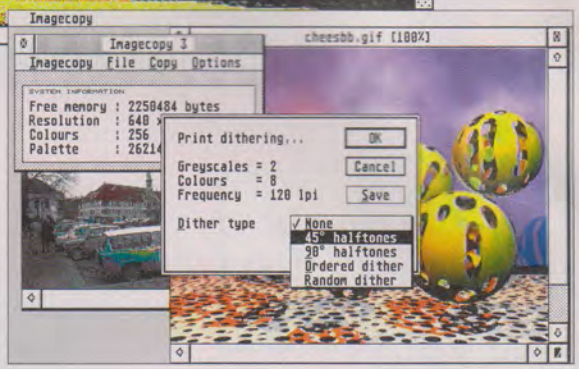
Firstly, *Imagecopy* now uses the protocol developed for the *Selectric* replacement file selector that allows several files to be selected in the file selector window and then automatically loaded or converted to another format one after the other.

Secondly, it is possible to create list files using a stand-alone utility (supplied with the program) both for loading and conversion. In this way you can create a list of all source images and then tell *Imagecopy* to view, print or convert them in a kind of controlled batch mode.



Selecting more than one image at a time with the shareware file selector, Selectric.

The pop-up menu offers all kinds of new options.



Random dither is just one print quality improvement.

to speed up JPEG compression and decompression using the Falcon's DSP chip.

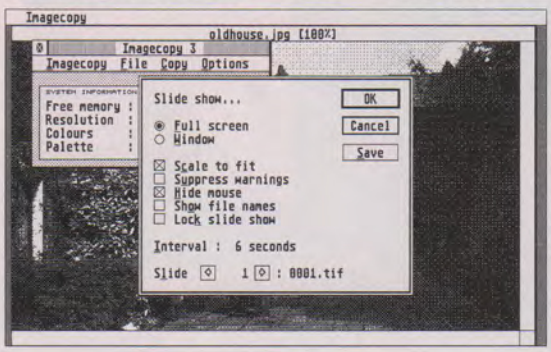
Perhaps the most significant addition to *Imagecopy 3.5* is the pop-up menu box that is available in every image window and is accessed via the right mouse button. With options like zoom in and out (up to 16 times in either direction), rotate, invert and flip, *Imagecopy* has taken a step towards becoming an image processing application and not just a utility. There is even a feature for aspect correction so that images such as *Degas* PI2s can be displayed properly. With the pop-up save option, images you have loaded for viewing can now be saved directly without having to reload them using the convert command.

My favourite feature is the thumbnail facility. While *Imagecopy 3.1* could certainly catalogue disks of clip art and images, it couldn't display them on-screen except as part of a slideshow. The revolutionary thumbnail option does all that and more. You can point *Imagecopy* to a folder full of images and it will load each one in turn, displaying them all in miniature format (roughly 96 by 64 pixels) in a single window. The file name is also shown and you can specify a colour for the background and the text. Using the pop-up "save" command, the catalogue can even be saved as an image file in its own right, making it perfect for creating computerised image catalogues. With your collection miniaturised in this way, you will never need to hunt through your disks for a particular image.

Another improvement is the random dither option for printing, instead of halftoning, plus a microweave option (best quality) that really does wonders for output quality, especially on inkjets and dot matrix printers that invariably display some degree of banding. This is equivalent to the shingling feature in *Flexidump 3*.

There are extra print qualities, double and quad, that print each line two or four times. This is only useful for worn out ribbons as it takes much longer to print and can actually ruin a new ribbon.

Inkjet owners can take advantage of the print density and black balance control while there is also support for the Epson Stylus Color, a superb 720 dpi colour printer reviewed on page 27 of this issue.



Starting a slideshow in ST high resolution.

VERDICT

Imagecopy now uses 50Kb less memory than it did before, making it well worth the upgrade price (£6.95 from version 3.1) if you use it regularly as an accessory.

This latest upgrade is well worth getting, whether or not you want the PhotoCD version. The pop-up menu and thumbnail facility has put it streets ahead of its competition and make it one of the most desirable utilities the Atari platform has ever seen.

SUMMARY

GOOD POINTS:
Unbeatable conversion facilities
Useful thumbnail feature
Improved print quality
Excellent optional PhotoCD support

BAD POINTS:
None!

FINAL WORD:
"Imagecopy 3.5 is an indispensable tool for anyone working with graphics on an Atari computer."

3 *Clicking on the Block button produces a preview of the image. Outline the part you want – but keep a check on the size.*

4 *The high resolution image is displayed in a window – use the pop-up menu to save it in any format you like.*

PERFORMANCE — OVERALL

EASE OF USE	✔✔✔✔✔✔✔✔✔
DOCUMENTATION	✔✔✔✔✔✔✔✔✔
EFFECTIVENESS	✔✔✔✔✔✔✔✔
VALUE FOR MONEY	✔✔✔✔✔✔✔✔

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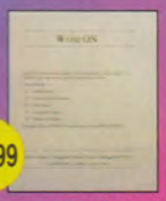

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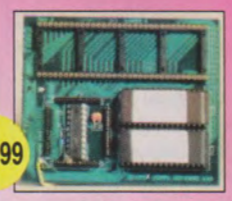

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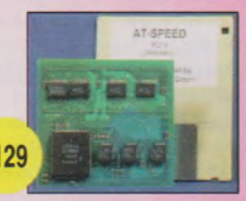

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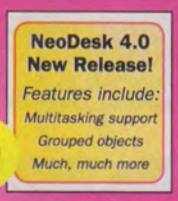

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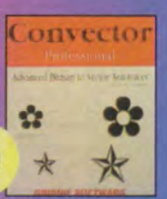

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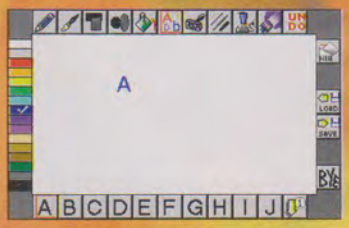
STEP BY STEP GUIDE

LOST FOR WORDS

Having produced a cracking picture, you decide you want to put some text in it to finish it off. Here's how...

1 *Click on the Alphabet symbol in the middle of the Option Menu in the top row of icons. The bottom row of icons (the tools) changes to letters of the alphabet.*



2 *Click on your first letter and the mouse pointer becomes that letter. If you can't see the character you want, click the yellow down arrow on the right to reveal more.*

3 *Click where you want your character to appear and it is fixed in place. Repeat this, choosing a new character each time, until you have placed all the characters you want.*

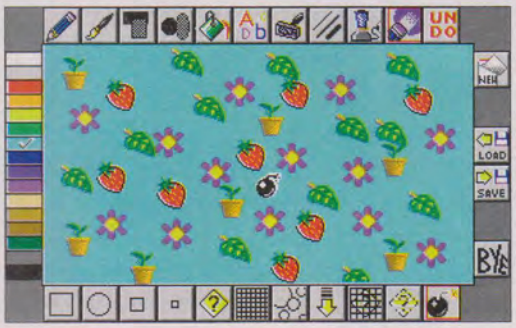
YOUNG AT ART

Art For Kids has so many effects tools, it's hard to know where to begin describing them. Richard Williams does his best...

Splashing around with some paint comes very high on the list of fun learning for most children. Art on the computer may not be quite the same experience as getting to grips with real palettes, pots and tubes of paint (plus copious amounts of water) but one package comes very close on account of its large number of easily applied effects and the sounds that accompany the use of its wide of tools: *Art For Kids*, created by Australian company Moving Pixels.

From the opening screens, which include music, sound and graphical effects, through to creating a colourful picture to quitting the program, which also uses special effects, this program is a delight for children of all ages.

So what exactly is it about *Art For Kids* that sets it apart from most other painting and drawing packages for the ST?



There's a bomb in my strawberries! Choose from a variety of eraser tools – including the bomb! One click on this and the picture is "nuked", displaying concentric rings before clearing the image.

KEY FACTS

Product:
Art For Kids
Company:
Goodman International
Contact:
01782 335650
Price:
£24.95

SYSTEM
Minimum Memory:
1Mb
Resolution:
ST Low
Computer:
STe, TT and Falcon

WHAT'S ON OFFER?

After loading from floppy or hard disk you are presented with the *Art For Kids* screen. No image is loaded at this stage but you can begin work right away on a new one, or load one of the images provided with the program.

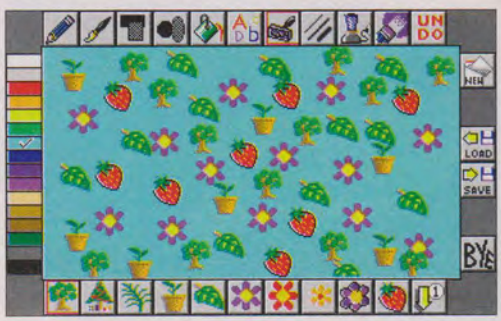
The main screen features an icon-style options menu across the top. You can choose from pencil, brush, boxes, circles, fill tool, alphabet (for entering text), stamps (for placing ready-made clip art into the picture), lines, blender (for special effects – more on this later), eraser and undo (undoes the last action you performed).

Along the bottom of the screen is the toolbox. Whenever you choose an option from the menu across the top, the toolbox changes accordingly. For instance, when you choose the pencil, different thicknesses of pencil can be selected from the toolbox, and when you choose the blender, the toolbox displays all the different effects available. When certain tools are selected, for instance the fill tool and the circles and squares tools, the toolbox displays a range of patterns that you can choose for your fill. Down the left side of the screen is the colour palette. Click on a colour and whatever you draw on-screen appears in that shade, with the exception of one or two special effects that use predetermined colours. Down the right side are the file controls – New, Load, Save and Bye (exit) are the options here. Unlike other options, these are selected by holding down the <Control> key before clicking on them with the mouse, presumably to prevent very young mouse operators from choosing them accidentally.

CHOICES

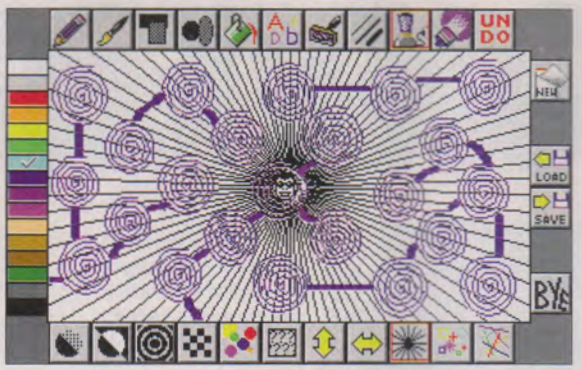
The number of choices you have when creating images with *Art For Kids* seems almost endless. Whereas in some packages selecting the eraser is just that, here there is a standard eraser with a choice of shapes, a "rub-in" tool that rubs in a new picture as the old one is rubbed out, a "lighten out" tool for repeatedly lightening a part or all of your picture, "blob out" and "scroll out" tools, and an option called random lines that fades your picture and replaces it in horizontal lines.

As if those aren't enough options for the eraser, there's also a bomb



You don't need to be a great artist to design a new table cloth like this one. Click on the stamp option and choose whichever stamp you wish to include from the bottom row.

4 ***Hold down the left mouse button and after selecting a letter drag it to get the kind of effect we've produced here with the letter E. Wicked or what!***



Choosing the blender gives you an amazing range of options. After choosing it, you see the available effects across the bottom of the screen. Here, we've just used the Rays tool to create a moiré effect.

After choosing the paint brush from the top, we selected colour bubbles from the tool-box at the bottom to create this colourful effect in the sky. The northern lights, or what?

SUMMARY

GOOD POINTS:
Easy to use
Wide variety of tools and effects
Great fun!

BAD POINTS:
No print option
Limited text facility

FINAL WORD:
"Art For Kids is a brilliant program that will keep creative kids entertained for hours."

tool, for completely "nuking" your picture and starting again. Possibly not the most politically-correct of icons!

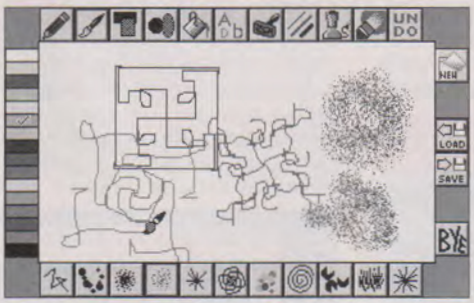
Bear in mind that these are the options for just a single tool. Detailing every option for every tool would take a manual of 40-odd pages, which is precisely what you get with *Art For Kids*. It's easy to understand, and written in the kind of language kids will enjoy. Those people at Moving Pixels certainly had fun when they put this package together!

The sound effects you get as you create your images are always appropriate to the current action, and great fun for everyone (adults included). For instance, when you use the fill tool to "pour" colour into a shape or background, the sound is just like water being poured into a container.

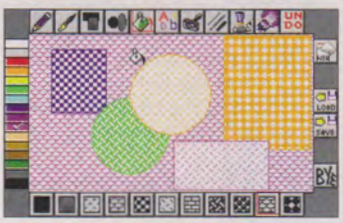
Children will fill shapes just for the fun of hearing the sound, but also learn very quickly what effect this has on the picture and how the results can be controlled by choosing different colours from the palette and experimenting with patterns from the toolbox. The paint brush option offers some of the most exciting tools provided by *Art For Kids*.

You can choose from scribble, drip, spray can, sprinkles spikes, kaleidoscope, colour bubbles, munchers, sticks and multi-line tools, creating some very pleasing effects. But perhaps the most remarkable effects are possible after choosing the blender from the top menu. These really are the icing on the cake of a very well-featured package. After choosing the blender, the available options in the toolbox are: lighten, which lets you quickly lighten the tones of your picture; inverter, which switches the original colours of your picture to their opposites (red becomes green and so on); ripples, which puts concentric circles into your image; chequer board, to make your masterpiece look like a game of chess; blobs; quilt; vertical and horizontal flip; rays; symbols (randomly generated by the program); and dashes – a bit like dropping coloured sticks into your picture. Brilliant!

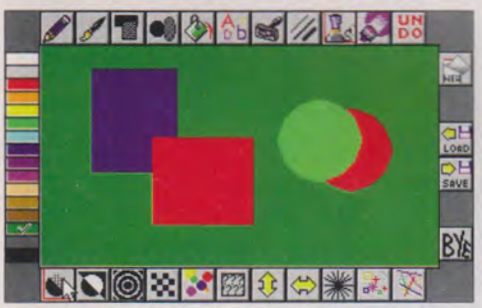
A useful tip for those who experiment with these tools is to save the picture before experimenting. If you ruin it, you can then bring your original masterpiece back from the disk.



Here's a selection of the kind of effects you can achieve with the kaleidoscope and sprinkles tools, which you can select after choosing the paintbrush.

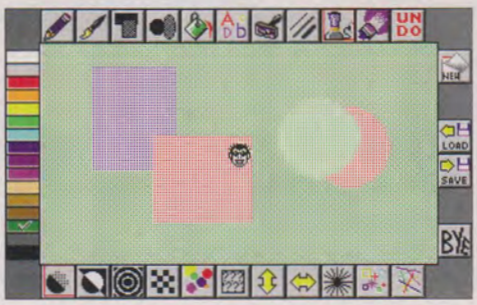


This masterpiece of abstract art demonstrates some of the range of patterns you can choose when using the box, circle and fill tools.



Before and after with the lighten tool. This is most effective when used to create backgrounds that don't impose too much...

... select the lighten tool after choosing the blender from the top menu and click anywhere on the picture...



VERDICT

Art For Kids is one of the finest art packages for children I have come across, irrespective of computer. The only serious flaw is in the handling of text. The way this has been implemented means children have a choice of capital letters only – which younger children will have greater difficulty recognising – and in a single "font", although the colours can be varied.

The program also lacks a print option. Your creations are destined to remain on screen only, unless, of course, you call them into a separate program like *Imagecopy 3* or *HP Chrome*. That said, there is probably no way an art package could compete for quality of printout with either of those two anyway.

If Moving Pixels could improve in the text area, it would undoubtedly have a world beater. As it is, we'll just have to settle for one of the best art packages ever to grace the ST.

PERFORMANCE		OVERALL
EASE OF USE	✔✔✔✔✔✔✔✔✔✔	92%
DOCUMENTATION	✔✔✔✔✔✔✔✔✔	
EFFECTIVENESS	✔✔✔✔✔✔✔✔	
VALUE FOR MONEY	✔✔✔✔✔✔✔✔✔✔	

CONVERTED!

Maurice Collins looks at a cheap image conversion utility from Compo that should make life easier for all graphics lovers...

Dithering in colour images is lost when the image is saved.

Creating a halftone for printing.

Once upon a time, every computer platform had its own graphics file formats, often derived from the particular programs that invented them. On the Apple Macintosh there was *MacPaint* and on the PC, the .PCX format from a program called *PC Paintbrush*. The Amiga had .HAM and .IFF/.LBM, from the famous *Deluxe Paint* program while on the Atari, formats like *Degas* and .IMG quickly became the accepted standards.

Now, life is quite different. The same old standards still exist, of course, but with the wider availability of huge clip art libraries (especially CD-ROM ones), the demand for conversion utilities has grown. They're certainly vital in DTP and graphics.

Many of you will already have just such a program. The best standalone packages are undoubtedly the FaST Club's *Imagecopy 3* and the somewhat clumsier shareware program *GEMView*, but many art and image processing programs like *TruePaint* and *TrueImage* can readily convert between bitmap image formats.

KEY FACTS

Product:
Studio Convert 1.0

Company:
Compo Software

Contact:
0487 773582

Price:
£9.99

SYSTEM

Minimum Memory:
0.5Mb

Resolution:
Any

Computer:
Any

FLEXIBLE FRIEND

Compo's *Studio Photo* supports an even wider range of file formats and the newly-released *Studio Convert* is essentially the same program without the tools and effects. In other words, *Studio Convert* can load almost any image, be it black and white or colour, and convert it into another format. That's its job and that's what it does. If it doesn't sound much, at under a tenner, it's still a bargain as you'll undoubtedly call on its services at some point.

The program, which comes on a single disk, runs on any Atari in any resolution. Sixteen-colour images can be viewed but images with more depth, such as 256 colour GIFs and 24-bit photographic-quality images, are dithered on-screen. In ST medium or high resolutions, the images are always dithered using a monochrome pattern. On TTs and Falcons more colours are available but it has to be said that the dithering is rather poor on a Falcon, even in 256-colour mode.

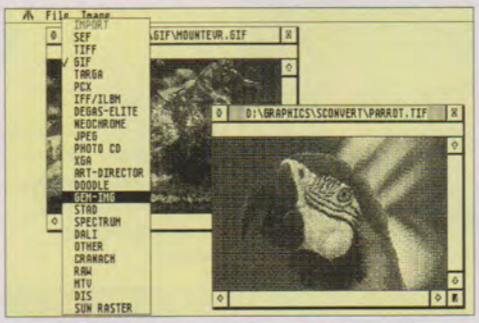
There are ten major formats that *Studio Convert* will load and save, including TIFF, Targa, .GIF, .PCX, .IFF, all versions of Degas, Neochrome, JPEG, .IMG and the proprietary .SEF format used by *Studio Photo*. It can read many more, ranging from Atari-specific ones like Spectrum 512, Doodle, STAD and Art Director to much more obscure ones like .XGA, Dali, Cranach, .RAW, .MTV, .DIS and .SUN. It also has the facility to load almost any type of image file as long as you can provide the program with details about pixel depth and header size. The lack of a manual means you have to experiment and I came pretty close to loading a *Windows* .BMP file apart from the fact that it was upside down and black and white!

Loaded images are displayed in a GEM window and you can load as many as memory and your operating system will allow. They can be viewed at a quarter size, half size, twice and four times magnification and can be mirrored in any direction – and inverted too.

A wide range of dither patterns can be applied and if the image is saved in the mono .IMG format, these patterns are saved too. This makes the program useful for halftoning colour images for printing or special effects when desktop publishing or designing creative graphics. There are 12 different patterns (actually there are 11 as numbers 0 and 7 are identical for some reason) and each can be applied in three different dot sizes.

VERDICT

Studio Convert is an easy program to use apart from the strange, and at times frustrating, requirement that you specify the file format to be loaded or saved before you select load or save. Screen redraws tend to be slow too, as in *Studio Photo*, but if you need a conversion utility to access weird and wonderful graphics, or simply to tidy up and standardise your own collection, *Studio Convert* is a cheap and cheerful solution. Throw in JPEG and PhotoCD support and it's a real bargain.

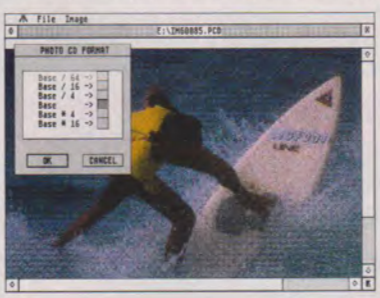


Studio Convert handles a wide range of images – this is ST high.

SPECIALIST TOOLS

JPEG and PhotoCD are becoming increasingly important as means of storing photographic quality images. *Studio Convert* will load and save JPEGs allowing you to specify the level of lossy compression as a percentage from 1 to 100. Depending on the image in question, values between 75 and 90% seem to work best.

The program also lets you load PhotoCD images from a CD-ROM drive attached to your ST at any desired resolution, from the wallet-sized 128 by 192 pixels to the standard-sized 768 by 512 pixels and higher still if you have the memory.



Loading a PhotoCD image into Studio Convert.

PERFORMANCE

EASE OF USE	✔✔✔✔✔✔✔✔
DOCUMENTATION	✔✔✔✔✔
EFFECTIVENESS	✔✔✔✔✔✔
VALUE FOR MONEY	✔✔✔✔✔✔✔✔

OVERALL 70%

SILVER SCREENS

Looking for a quality monitor? Ofir Gal finds that Idek has a couple of goodies on offer...

If you're planning to buy a Falcon or a graphics card for your ST, you will need to consider the ever-confusing issue of monitors. There's a considerable lack of understanding over the terms VGA, SVGA, multisync and autoscan – and most adverts leave you none the wiser.

System Solutions (0181-693 3355) now supplies Idek monitors, ideal for use with the Falcon and any computer with a graphics card. The two looked at here are both SVGA multiscan monitors capable of a wide range of resolutions and screen modes. On a Falcon you should be able to display all ST compatibility modes and extended resolutions. The only limitation is that true colour mode is still limited.

VISION MASTER 15

While System Solutions has a 14" SVGA monitor in its armoury, it's worth paying the extra and getting the Vision Master 15. The difference between a 14" and 15" monitor might not sound like much but it certainly makes a big difference when working with one. Image quality is better and high resolutions beyond 800 by 600 pixels are much more usable. This monitor can stretch up to 1280 by 1024 pixels although text display at such resolutions is rather unsatisfactory.

The front panel features a fully digital image control. There are a total of eight controls to adjust image positioning on screen and its aspect ratio. The setting of each control is stored immediately and recalled automatically. This means that you no longer have to fiddle with the controls whenever you change resolutions.The display is crystal clear and certainly rivals the more expensive, Trinitron-based monitors. It is the ideal solution for Falcon owners, but if you're using a graphics card, read on...

You'd be amazed at the difference between a standard 14" RGB monitor and the Vision Master 15...

VISION MASTER 17

If you have a graphics card, or plan to get one, you may wish to consider this monitor. Capable of displaying resolutions up to 1600 by 1200 pixels, this is a high-spec monitor, although 1024 by 768 pixels is probably as far it will go before image clarity starts to suffer.

Like its 15" brother, this features digital controls and user memories. Three buttons are used to access a backlit LCD display and there are no less than 14 different parameters that can be adjusted, which explains why this is a perfect monitor for designers. The parameters range from the basic brightness control right through to RGB colour correction, passing controls for screen tilt, trapezoid and pin-cushion. As with the 15" version, all such settings are stored and recalled automatically, so they need only be set once per resolution.

The built-in screen saver is a useful feature that is becoming more popular. This senses inactivity and shuts the monitor off after a user-defined period of time. Power consumption at standby mode is a mere 10 watts, compared with 130 watts when in operation.

Image quality is superb, making this ideal for CAD and graphics work. Probably an overkill for a Falcon system, the Vision Master 17 is well suited to a system equipped with a graphics card. To be honest, even a 17" monitor is not ideal for a 1024 by 768 pixel resolution where a 20" display is better suited. If only my bank manager agreed...

The Vision Master 17 offers excellent quality for the discerning among you who need a decent screen for DTP or graphics.

AT A GLANCE

All the relevant facts 'n' figures at your fingertips...

Monitor	Vision Master 15	Vision Master 17
Model	MF5315	MF8617
Horizontal frequency	30-68kHz	23.5-86kHz
Vertical frequency	50-90Hz	50-120Hz
Dot pitch (mm)	0.28	0.26
Digital controls	Yes	Yes
User presets	22	21
FST	Yes	Yes
Tilt and turn stand	Yes	Yes
Anti-glare screen	Yes	Yes
Retail Price	£379	£699
Ease of use	8	8
Documentation	9	9
Effectiveness	9	9
Value for money	8	7
Overall	**86%**	**83%**

JARGON JOGGER

Horizontal Frequency: the number of times the screen is scanned per second horizontally. Higher values are better.

Vertical Frequency: the refresh rate of the screen. Values under 60Hz result in visible flicker.

Dot Pitch: size of the smallest dot the screen can display. The smaller the value, the sharper the image.

FST: acronym for Flatter Squarer Tube. Generally gives a better image.

VGA: acronym for Video Graphics Array. A PC display standard normally used to describe a 640 by 480 pixel resolution with a refresh rate of 60Hz.

SVGA: Super VGA is an enhanced version of the VGA standard, offering 800 by 600 pixels at 56, 60 or 72Hz.

Multiscan: a monitor that can display several screen modes.

Multisync: trademark of NEC, the first company to manufacture the multiscan technology.

Autoscan: a multiscan monitor that can automatically adjust to a change in frequency.

Trapezoid: allows adjustment of screen geometry.

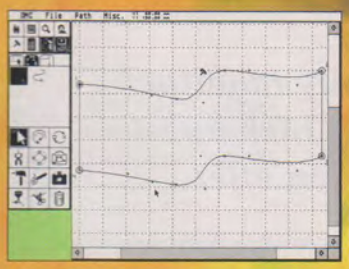
Pin-cushion: enables correction of screen curving at the sides.

STEP BY STEP GUIDE

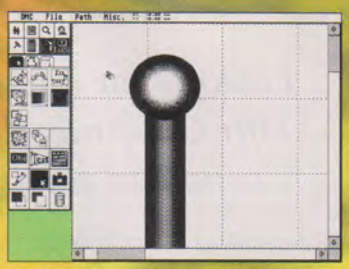
OUT OF THIS WORLD!

Enough theory – let's put *Outline Art 3* through its paces by combining a few of the techniques discussed in the tutorial...

1 ***First, an ST Review logo is constructed; it's basically two straightforward paths with some flex-text laid over the top.***



2 ***Next, a flag-shaped path is constructed and the corners marked before moving back to the object editor.***



3 ***The flag pole takes a little more effort. Careful use of the clipboard is needed to create the shaded sphere perched on top.***

HOOK, LINE AND

Wanna make the most of Calamus? You need Outline Art 3. Nial Grimes conjures up a few essential tips...

Calamus SL is uniquely powerful where vector graphics are concerned, but a good drawing program is still essential if you want to give your documents impact. *Outline Art 3* is DMC's own special effects package and it works like a true star with all versions of *Calamus*, from 1.09 right through to SL. In fact, "peaches and cream" doesn't even begin to describe what a great team these packages make. So let's get our fingers sticky by taking a practical look at using one of the hottest duos on the ST market...

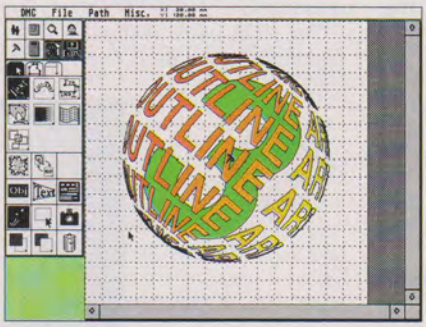
COUNT ME IN

Outline Art is certainly not a traditional vector art package. However, as a means of playing with fonts and effects, it has no equal; you can bend, stretch and generally fiddle with characters to your heart's content. Drawings are made up from a number of different elements. In line with the typographical nature of the program, the first three are dedicated to text – angled, circular and "flex" to be precise. The most basic benefit of **O-Line** text is that it can be scaled freely from within *Calamus* – no need to worry about proportions.

With some unsuspecting type sitting on the screen, the fun really starts! *Outline Art* is capable of stretching objects to fit onto a control path – a process known as "mapping". This is ideal for creating logos and you'll find that most ST companies have a tell-tale stretched emblem on their headed note-paper.

Gradient fills can also be mapped onto a control path – in fact, just about anything can be mapped onto a control path, whole groups of objects included! Incidentally, if you're finding the screen updates a bit slow when dealing with gradient fills, try switching to draft mode.

One thing that will annoy artists is the lack of drawing tools. If you do use a lot of primitive shapes (circles, squares and the like) it makes sense to save them to disk as individual files that can be "merged" into a design at any point. Before you go insane trying to build a circle with *bézier* curves though, there is an easier way. Although O-line doesn't have a tool for circular paths, it will let you produce circular text. The trick is to set up a ring of dummy text (with the parameters 0-360°) and pinch the path by saving it to the clipboard.

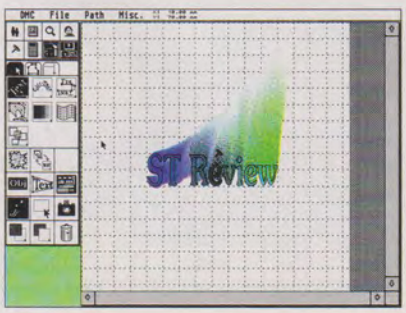


Rotation and other mathematical functions are handled through the calculator.

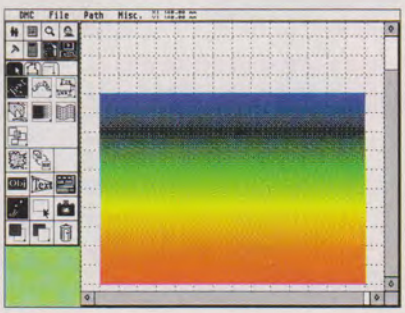
CALCULATED RETREAT

With a few elements sitting comfortably on the page, the **Calculator** comes into play. In technical terms, this applies a formula to each point in an object and changes its appearance. Cast your minds back to your school days and you'll no doubt remember performing translations on graph paper – it's the same thing, only the computer takes care of the mathematics.

Many formulae are built into the Calculator and some take on a similar role as mapping. You will find yourself using some of these functions all of the time – rotate for example. This is especially true if you are still using *Calamus 1.09*; if you need a rotated .CVG, just import it into O-Line and do the business. The order in which effects are applied doesn't really matter – you can rotate and then map or vice versa. Even the calculator pales into insignificance



The clipboard is multi-talented and can be used to produce anything from copied frames to complex drop-shadows.



Graduated fills can be very striking, but be warned – Calamus takes a while to draw them.

4 ***And finally, the drawing is exported as a .CVG file and squirted straight into Calamus – not bad for a few minutes' work!***

WIN A COPY OF CALAMUS!

We're giving away £600 worth of the premier DTP package...

Would you like to get involved in the world of DTP? Well, a couple of copies of *Calamus SL* and four copies of *Calamus 1.09N* are up for grabs in our easy-to-enter competition! Just answer the three questions below – what could be easier!

1. Which German company manufactures *Calamus*?

2. Who is the UK distributor?

3. Which is the third, and now defunct, member of the *Calamus* clan after *SL* and *1.09N*?

Send your entry on a postcard or the back of a sealed envelope to:
***Calamus Competition*, Atari ST Review, Media House, Adlington Park, Macclesfield SK10 4NP.**

The editor's decision is final and no correspondence will be entered into. The winners will be the first six correct entries pulled out of our flat hat after the closing date of January 31, 1995.

SINKER!

when compared to the power of the O-Line clipboard. At the simplest level it can be used to create drop shadows. Just use a small offset for each copy, ramp up the colour and several copies later you will be presented with a marvellous sloping shadow. By bringing the Calculator into the equation (*pun time... Ed*) even more staggering effects can be created. Bear in mind though that flamboyant graphics should be used sparingly and then only after careful deliberation.

CALLING CALAMUS

Calamus can't deal with O-Line files directly: you need to "Export" to a .CVG graphic. Whatever you do, don't delete the original .OL file – the colour information may not be that useful right now, but it will definitely come in handy should you ever decide to upgrade to *SL*.

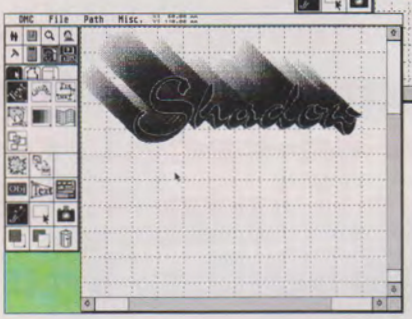
Besides which, O-Line is happier dealing with its own files. Remember that .CVG isn't the output option – PostScript and Encapsulated PostScript are also available. The .EPS files produced by O-Line even load directly into *Adobe Illustrator* on the Macintosh!

Outline Art may not be the easiest program on earth to use, but the results you can achieve with effort are stunning.

And you don't need to take our word for it – the package has been used to produce some of the illustrations in *ST Review*!

Outline Art 3 can export its drawings in either Calamus or PostScript format.

Groups of objects can be mapped easily onto control paths – ideal for company logos.



Outline Art may lack simple drawing tools, but for Calamus special effects, it's the bizzo!

EXCLUSIVE OFFER FOR ST REVIEW READERS

SAVE £100 ON OUTLINE ART 3!

For a period of two months (until 28/2/95), JCA (Europe) is offering *ST Review* readers the chance of owning *Outline Art 3* at the unbelievably low price of *£99!*

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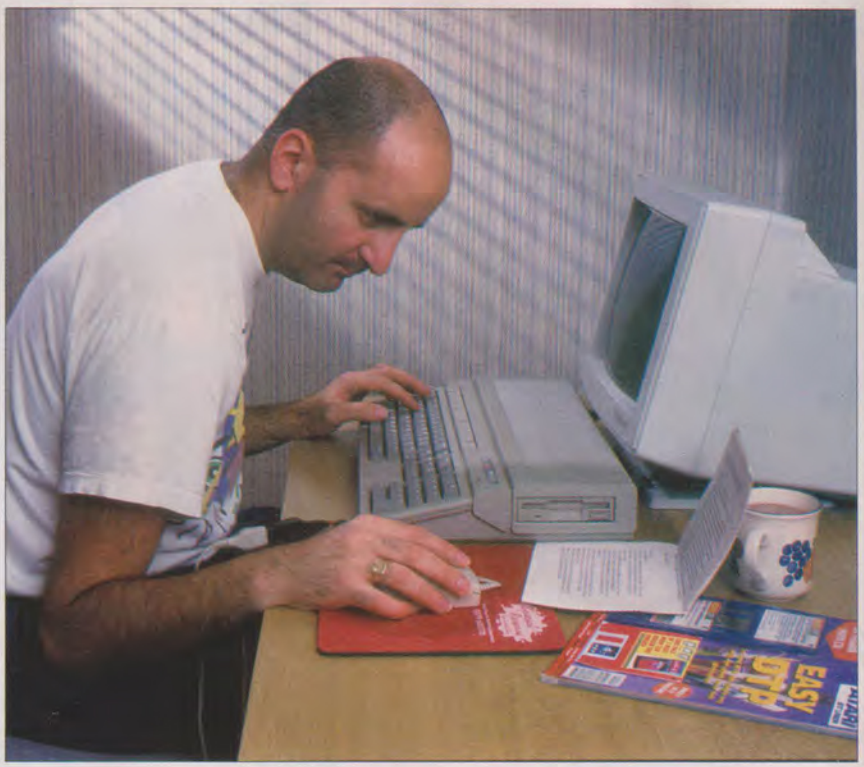
Signed _____

Date _____

For many years now I've suffered with the common, and very human, complaint of backache. Recently, I've also developed a discomfort in the wrist and back of my right hand together with a sharp pain in the pad of the large finger whenever it touches the keyboard. The pain in the wrist and hand is particularly noticeable when using the cursor keys and the mouse – even now as I write this. The things we journalists have to endure to entertain you each month!



All wrong – both wrists are under strain and the stooping posture is due to using the coffee cup as in impromptu copy holder! And even when our editor looks up, the monitor is far too low down .

BODY MATTERS

PART ONE: UPPER BODY PROBLEMS

In the first of a two-part series, Mark Baines considers the aches and pains of the typical computer user...

WORK RELATED

What I and many thousands of other people suffer from are **WULDs**: Work-related Upper Limb Disorders, first recognised years ago in chicken pluckers and now increasingly common in those that work at computers and VDU screens for long and repeated periods of time. The seeds are laid in school, continued throughout your education and into work, pastimes and hobbies. How many hours a day do you spend at a computer? On January 1, 1993 the Health and Safety (Display Screen Equipment) Regulations 1992 came into force. These implement a European directive (No. 90/270/EEC) on minimum safety and health requirements for work with display screen equipment.

The regulations are primarily aimed at the self-employed or those employing others who work for any amount of time at a computer terminal, VDU or keyboard. If this applies to you and you haven't already acted upon these directions then I strongly suggest you get in contact with the HSE immediately (address below).

If you are an employee seeking advice then see your local health and safety officer or union/association representative.

But what about those of you enjoying computing as a hobby? Who is looking after you? Well, no one really – it's left up to you to decide how best to adjust your working environment to suit you and help prevent these long lasting and painful disorders. These two articles are aimed at providing enough information for you to help yourself.

BACK PAINS

The lumbar region of your vertebral column (the five vertebrae at the base of your spine) supports the whole weight of your upper body when standing or sitting. This region should have a natural inward curvature and trouble starts when, through bad posture, you try to uncurl or straighten those bones into a shape that causes the soft pads between them to deform, rupture and trap nerves – all the symptoms of slipped discs, lumbago or sciatica...

If you don't suffer from back pains already then quite often the most "comfortable" position is a slouching, relaxed spine one. It may be comfortable *now*, but how many years do you see yourself continually sitting like that? While it may by terribly un-hip to sit up straight, it's a fact that more working days are lost to backache than any other medical complaint!

One other problem associated with continued leaning forward is muscle cramps and pains in the lower abdomen wall.

Don't lean on your desk, but use the arms on the chair instead. This is extremely important in pregnant women.

ARE YOU SITTING COMFORTABLY?

- Sit upright and make an effort to curve the base of your spine inwards, not out.
- Place a cushion into that curvature and sit back in the chair. Better still, if you can afford it, is to buy a properly designed office chair with lumbar support and an adjustable back. They may be expensive but if you spend more than a few hours a day at your computer, shouldn't you be comfortable?
- The chair should enable you to move your legs under the table or desk and should be the correct height so that your forearms are horizontal and not sloping down or, worse, up.
- The chair should be soft so that it doesn't cut into the backs of your thighs, so slowing down the blood circulation.
- If your feet don't reach the floor then get a foot rest with a sloping front surface. This has the effect of pushing you out of a crouching position, backwards and straight. It also lifts the thighs off the seat slightly, increasing blood flow.
- The underside of your desk shouldn't be crowded with old equipment, books or papers, so restricting your leg movements.

UPPER LIMBS

Sit at your computer and place your hands on the keys or mouse as if to do some work. Examine how you hold yourself. Where is the heel of the hand on the mouse: rested or hovering? If hovering, then you are placing a lot of strain on those muscles to maintain that attitude.

A worse situation is where you put the heel of the hand on the mouse mat so that the hand arches upwards at the wrist over the mouse. This stresses the tendons, going through the wrist to the fingers – you can see them move under the skin on the back of the hand. This strain results in *Peritendinitis*, an inflammation and soreness in those tendons and

Much better – both wrists have decent supports and a trackball has replaced the mouse. A copy holder and a couple of suitable boxes under the monitor bring all text up to eye level. But none of these improve the extreme haircut...

Four useful items, including a foot rest.

SEATING AND POSTURE TICK LIST

Check out our list and see how your working environment scores out of ten...

- ❑ Seat back adjustability
- ❑ Lumbar support
- ❑ Seat height adjustability
- ❑ Soft under the thighs to relieve excess pressure
- ❑ Foot rest to support feet and raise thighs
- ❑ Space for movement
- ❑ Horizontal forearms
- ❑ Minimal flexion and extension of joints, especially wrists
- ❑ Space for resting wrists when using keyboard and mouse
- ❑ Correct screen and keyboard height/angle

surrounding tissue. Worse is *Carpal Tunnel Syndrome* where the nerves supplying the hand are pinched by the swelling of the membranes forming the tunnel through which they pass in the wrist. This brings about pain and numbness in the wrist and hand. In these respects, a mouse is a badly designed device for constant input. An alternative is the old trackball where the hand rests on the device itself – your very own editor swears by them. At the keyboard, are the wrists bent or straight? Again, bent is incorrect and will result in the same problems as mentioned above. If they are bent then the seat is too low. Remember that the lower arms ought to be straight and horizontal.

Are your shoulders hunched up? If so, the chair is too low. Can you feel the tension in the muscles of the neck and shoulders? They have to be contracted to support and hold your arms in place. That's fine for an hour or so, but prolonged tension will result in tiredness in the neck and shoulders.

Relax – don't hold yourself with muscles tensed. Sitting upright doesn't mean that you have to tighten all the muscles to do so – push yourself backwards into the chair and see how the back and the forearms straighten.

Side view of vertebral column showing the natural curvature of the lumbar region.

HANDS ON

- Change your position as often as is practicable. Go for a walk around the house and socialise with the rest of the household!
- Don't stretch – adjust the keyboard position for the correct height and angle.
- Your eyes should be the same height as the top of your screen. Most Atari users have the monitor on the desk behind the computer. Put something underneath – a hard drive is ideal or get a plinth to sit the monitor on so you are not bending the neck downwards.
- Obtain a wrist rest situated in front of the keyboard so that the heels of the hands can sit comfortably supported while the fingers do the work of typing. Force yourself to use all your fingers – spread the work load.
- Don't bend your hands and wrists. When not typing, rest the hands on your lap not on the keyboard or over the mouse. This increases the blood flow and relaxes the arms.
- Type gently – don't bash the keys. The switch in the mouse is a microswitch, and need only move a millimetre. Use the appropriate amount of energy for the job.
- Avoid overstretching the fingers – use two hands to type <Control><L>!
- If copying or referring to notes, place them in a copy holder at the same height as the screen and next to it. This prevents regular flexing of the neck and changing focus of the eyes which leads to tiredness. One of those copy holders attached to the side or top of the monitor is perfect.
- Reduce irritating noises such as fans, keyboard beeps, motors or other equipment as far as possible. Many fans can be switched off or fitted with thermostatic devices so that they only operate when needed. Play some music in the background.
- The room should be warm (about 20-25°C) with a supply of fresh air. Photocopiers and laser printers should be placed as far away as possible, ideally in another room, as the toner and ozone are potentially dangerous.

PUBLICATIONS

From **Health and Safety Executive**, HSE Information Centre, Broad Lane, Sheffield S3 7HQ. Tel: 01742 892345:

Display screen equipment work – guidance on regulations:
L25 HMSO ISBN 0 11 886331 2

Working with VDUs:
INF(G) 36L 1992 (free)

Ergonomics at work:
IND(G)90L 1990 (free)

Seating at Work:
HS(G)57 1991 HMSO
ISBN 0 11 885431 3

Work-related Upper Limb Disorder: a guide to prevention:
HS(G)60 1990 HMSO
ISBN 0 11 885565 4

Human factors in industrial safety:
HS(G) 48 HMSO
ISBN 11 885486 0

Lighten the Load awareness campaign on musculoskeletal disorders. Campaign pack available form Health Operations Branch, Field Operations Division, HSE, Daniel House, Trinity Road, Bootle, Merseyside, L20 7HE.

British Standard Institution:
Ergonomics of design and use of visual display terminals (VDTs) in offices: BS 7179

DTI:
Usability Now - HCI Standards and Regulations – a compilation of relevant standards in the ergonomics field
(free from 0509 264083)

THE SKYLAB'S

Ian Waugh reports back on a rather interesting project between Radio 1 FM and the band, Skylab...

It's a not an easy job being a record plugger. It has its compensations but it's not easy. Given the task of promoting a new Ambient band called **Skylab**, Phonogram promo supremo, Bruno Morelli, devised the idea of setting up an interactive radio session with the band. The idea was to allow schools to hear the music on *One FM*, download it using a telephone line, remix it and send it back to the studio.

INITIAL PROBLEMS

The idea was not without its technical problems so Bruno called me in as technical advisor. The main problem, as musicians will realise, was that schools were extremely unlikely to have the same equipment as Skylab so a MIDI File, the obvious method of music transfer, would be of little use.

Skylab's main instrument is an Akai sampler which further compounded the problem: have you ever tried performing a sample dump via MIDI or sending 20Mb of data down the telephone line? So it was decided to run a competition on One FM. Skylab would transport its equipment to the winning school and help the winner remix an original composition. To win, schools had to write in and say why they should have this opportunity.

Fine – that ruled out any potential music transmission problems. Or so I thought. Bruno and the band decided it would still be a great idea to transfer the music from One FM to the winning school via the telephone. Although the project had been modified in the light of available technology (or at least affordable technology), for those involved there was still the commitment to show schools and One FM listeners this hi-tech side of music transfer.

It was decided to provide One FM and the school with modems and comms software and transmit the MIDI File on which the song was based down the wire at the same time as it was being broadcast by One FM. The sounds and samples would already be at the school but at least the "notes" would be transmitted by computer.

ENTER THE ST

With a limitless choice of computer equipment, you may be surprised to learn that Howie B still uses an ordinary Atari ST with Emagic's *Notator* sequencer. Not even a hard drive. Naturally, the band was very keen that STs should be used for the file transfer. Simon Askew, the BBC Engineer in charge of the outside broadcast from the school, took his ST into the One FM studio; the band used its own at the school.

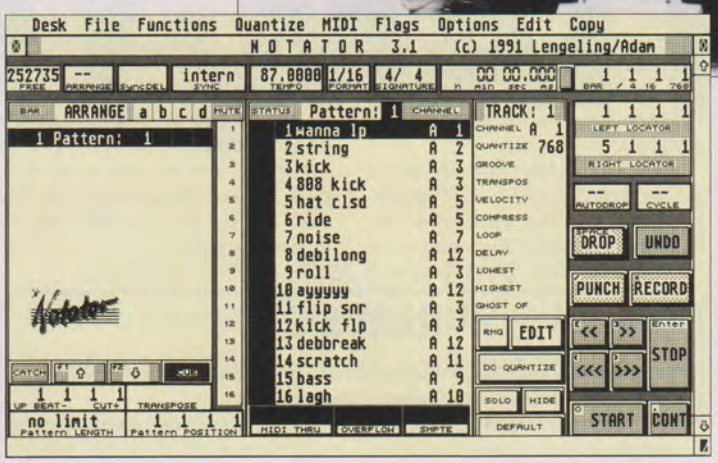
With some assistance from Hayes in the shape of two modems, and the shareware *Connect* comms software, everything was ready. Everyone insisted on a trial run so they tried transferring files between two computers inside the One FM studio. Simon also sent the file up to me 250 miles away, just to be sure. Everything worked fine.

The winner of the competition was John Campbell, aged 16, of St. Macnissi's College in Co. Antrim, Northern Ireland. He pointed out that St. Macnissi's has a gothic heritage and so was the ideal place to perform ambient music! He was also keen to get some modern musical equipment into Northern Ireland as, so he says, it is the last place on earth to see any hi-tech gear. Retailers, write to St. Macnissi's, not *ST Review*...

John's letter won the day, or the evening to be precise. On November 2, Skylab and the One FM team were ensconced in St. Macnissi's to take part, live, in the Evening Session hosted by Steve Lamacq and Jo Wylie.

Skylab had written a completely new track called *The Blues* for the event. As broadcast time approached, fingers were crossed.

Skylab – dressed for the occasion...



Skylab's "The Blues" MIDI File, transmitted from One FM to St. Macnissi's, consists of 16 tracks – and yet was only 3Kb in size!

WHAT IS SKYLAB?

Skylab is a collection of four artists: Mat Ducasse, Howie B and, from Major Force and Love TKO, Toshi and Kudo.

Mat had been working on his own projects at Skylab, his attic studio, creating hundreds of hours worth of taped pieces, but without order or direction. Howie B had spent many years mixing and recording film soundtracks with Hans Zimmer and Stanley Myers. He'd also worked with Soul II Soul, Sinead O'Connor, Neneh Cherry and The Chimes. Toshi and Kudo were originally in an avant-garde new wave band called the Plastiks which mutated into mad hip-hoppers, Melon.

Mat heard a mix of Love TKO by Howie B and decided he might be able to provide the necessary order for his music. Howie introduced him to heroes Toshi and Kudo and the Skylab project was born in early 1994.

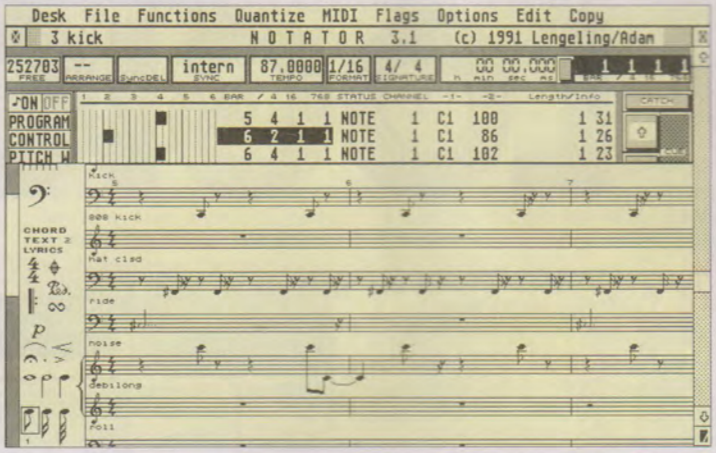
Working in various combinations, the four completely revised their working methods. Programming was out in favour of an experimental, open aesthetic approach. The result, if you believe the blurbs, is a "mixture of complete chaos and absolutely refined order". It's Ambient music to chill out to and contains a wide variety of sounds held together by various combinations of drums and rhythms.

Skylab's first CD, *Skylab #1*, has just been released on Phonogram's new dance label, L'Attitude. A single from the CD, *Seashell*, has also been released, a limited edition run of 5,000 blue vinyl copies. It's quite commercial (for Ambient), in a similar vein to *Little Fluffy Clouds* by The Orb.

THE LIMIT!

One FM dialled the school, the ST answered, the file was transferred and the track was played from One FM. The transfer didn't take long as the file was very short, containing only triggers for samples that were in the Akai sampler.

John and the band got to work on the remix straight away. John had very definite ideas about what he wanted to do. He added a new snare track and a new hi-hat line. The resulting remix was much more "up there" than the original, rather laid back version. John was thrilled with the whole experience, describing it "unforgettable" and "surreal". His remixed track was broadcast the next night on One FM.



The score for "The Blues" looks rather sparse but the notes in the tracks were used simply as triggers for the Akai sampler.

TECHNO PLUS

But the superhighway aspect of music transmission and distribution had caught Skylab's imagination and the band still wanted to produce a piece of music which everyone would be able to play and remix. The only way to do this would be to use General MIDI and save the result as a Standard MIDI File.

GM may well serve the needs of mainstream rock and pop music, and even the classics, but it's not equipped for sample-based music such as Ambient. However up to a challenge, the band took it on board and produced a GM track for universal distribution and remixing. They called it *Bruno* – ah, the popularity of the record promotion manager!

The band wrote the GM track at the same time as the competition track and it was finished the day before the broadcast. Bruno (Morelli, that is), sent a copy of *Bruno* (the song) up to me via snail mail (*isn't the Post Office just great... Ed*).

The band used a Roland SC-88 Super Sound Canvas and embedded the voice data in SysEx dumps. If you have an SC-88 it should play perfectly. However, for users of other GM modules and less-than-super GS units, it was necessary to put program change instructions in the tracks themselves.

I had arranged to put the file on a bulletin board called *Electronic Courier* and the Sysop, David Barr, had spent hours creating a set of front-end menus so One FM listeners, which ever computer they were using, would be able to download the correct file. I also had to create *Read.me* files for each computer format so anyone downloading the file would know how to use it.

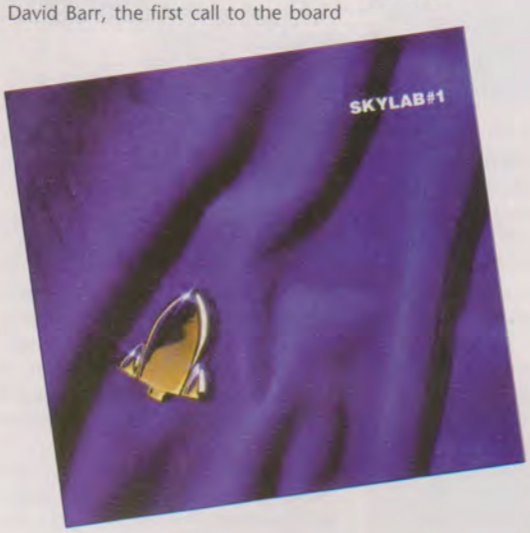
The day of November 3rd found me frantically creating files and uploading them to Electronic Courier – and just in time. According to David Barr, the first call to the board arrived within two minutes of the number being announced on One FM! The power of radio.

The files are still there if you want to join in the remix process. Dial 0232 705452 or 401737, logon as *One FM*, use the password *Skylab* and follow the menu prompts.

GOOD RESULT

The whole Skylab project was a resounding success. The file transfers went well, John Campbell and the school thoroughly enjoyed every minute of it, Bruno achieved his aim of getting airplay for the band and Skylab enjoyed the experience. So much so that its next project is a live radio broadcast!

We can't offer you the chance of remixing a Skylab track, but you can listen to the debut CD album courtesy of the five that we're giving away...



One guess what Skylab's favourite colour is – even the CD is coated in a blue hue!

Atari ST – still the pro musician's choice when it comes to sequencing. Skylab took its own to St. Macnissi's College for the One FM broadcast. Photograph courtesy of the Belfast Telegraph.

WIN THE SKYLAB CD!

Five copies of Skylab's debut CD album up for grabs...

Fancy a copy of the Skylab album? All you have to do is answer the following two questions:

1. What is the name of Emagic's replacement for *Notator?*

2. Skylab comprises of how many people?

Send your entry on a postcard or the back of a sealed envelope to: *Skylab Competition*, Atari *ST Review*, Media House, Adlington Park, Macclesfield SK10 4NP.

The editor's decision is final and no correspondence will be entered into. The winners will be the first five correct entries pulled out of our CD box after the closing date of January 31, 1995.

Notator Logic finally has an audio counterpart as Ian Waugh discovers...

SOUNDS LOGICAL

KEY FACTS

Product:
Notator Logic Audio
Company:
Sound Technology
Contact:
01462 480000
Price:
£159 (requires *Notator Logic* – £349)

SYSTEM
Minimum Memory:
4Mb
Resolution:
Any
Computer:
Falcon with a hard disk

INSIDE INFO

Logic Audio is the natural evolution of Emagic's *Notator*. When it came to updating the program, it was decided to create a new sequencer, *Notator Logic*, from scratch. This gave the development team the opportunity to design a totally new program without having to bolt ideas onto an old chassis.

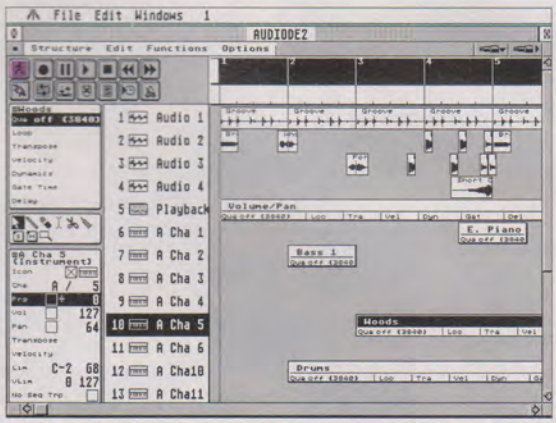
The only current alternative is *Cubase Audio* which has a total retail price of £799 (compared with *Logic Audio*'s £508). *Cubase Audio* cannot work with the Falcon's internal IDE drive but the SCSI drive requirements are less demanding.

Cubase Audio has recently been updated to support 16 audio tracks. This is pushing the Falcon to its absolute limit and while some deterioration in audio quality may be noticeable, at least the option is there. *Cubase Audio* also has a Time Stretch function but no Audio to MIDI Groove template.

Deciding between the two systems is difficult. If you already use *Cubase* or *Logic* then the choice is obvious. If you're a newcomer you may find the *Cubase* sequencer initially easier to get to grips with, although *Logic* is intrinsically more powerful and scores on price.

The integration of MIDI and audio data in one system is a musician's dream. The Falcon made direct-to-disk recording at an affordable price a viable proposition: *Notator Logic Audio* now offers the integration.

As with all direct-to-disk systems on the Falcon, you get better results with an external analogue-to-digital converter. The manual recommends the Soundpool FDI which offers 44.1 and 48kHz recording, the CD and DAT sample rates, which the Falcon's own hardware cannot handle.



MIDI and audio data share the same Arrange page and can be manipulated in similar ways.

ARRANGEMENTS

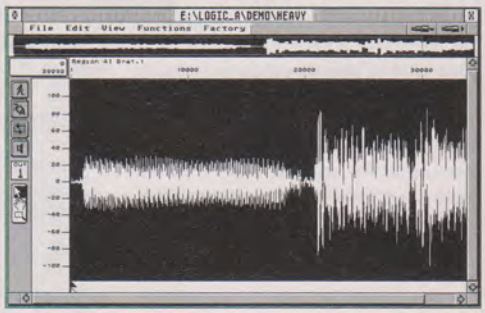
The first thing you notice is that audio tracks sit alongside their MIDI cousins in the Arrange page. In fact, you can cut, copy and paste them just like MIDI tracks.

However, these are just pointers to the real audio data which is, as you would expect, found in files on your hard disk. The chances are that you won't want to use complete files so you can divide them up into regions and create as many of these from a single audio file as you wish.

The **Audio** window lists the audio files and the regions you have created from them. To insert a region into a song, just drag it to the Arrange page. What could be simpler?

To help you position regions accurately within a song, you can set up Anchors within them. These reference a particular point in time such as a bass drum hit or a sound effect. When you move a region, you see the Anchor point displayed, not the start or end as in the case of a MIDI pattern. Anchors make it easy to sync audio data to MIDI tracks and other audio tracks. Recording audio tracks is fairly straightforward. The **Monitor** window lets you check the levels of incoming audio data while **Hardware Setup** allows you to adjust the input and output levels. Avoid signal distortion like the plague (a clip indicator shows when you hit a peak) as an overdriven digital signal distorts.

Next, you make a track as an audio track in the track list, hit record and off you go. The recording appears in the Arrange page as it progresses and also in the Audio window. You can record in stereo, too, in which case the program puts the left and right channels on adjacent tracks. You can, of course, listen to MIDI play-back during recording to get everything in sync.



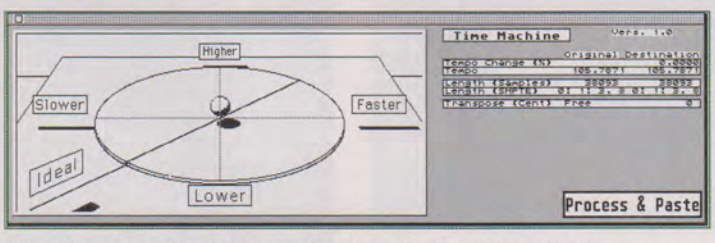
You can edit the audio file on disk directly with the Sample Editor.

FACILITIES

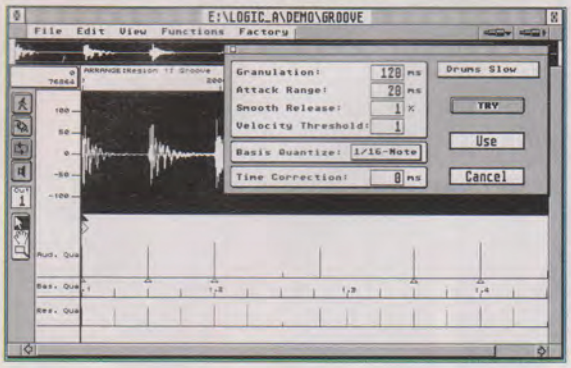
If you want to hack into the original audio files, use the **Sample Editor**. This works on traditional waveform edit principles and if you've used an ST or Falcon sampler it won't take long to feel at home here. Be careful though – you're editing the original disk file here although some functions can be undone.

There are several processing functions including Normalise (boosts the signal to its loudest possible level), Change Gain (alters the level by a specified amount), Fade In and Out, Silence, Invert (corrects phase cancellations in mono mixes), Reverse and Trim.

One of the neatest functions lies under the **Digital Factory** menu. The Time and Pitch Machine lets you change the pitch without changing the length and vice versa. It's a great feature and it works very well as long



The Time Machine lets you alter the pitch and length of a recording independent of each other. Notice the line that indicates the ideal conversion.



Audio to MIDI Groove Template creates a groove quantise setting from the audio data which you can then apply to a MIDI track.

as you don't try to make the changes too extreme. It uses a neat circular graph to show how close you are to the ideal transformation.

Other useful functions include one to help you match the tempo to an audio recording, and one to create a MIDI Groove from the audio data.

Logic Audio has a potential of eight audio tracks and the program includes an 8 into 2 mixer using the Falcon's DSP to mix the audio tracks into a stereo output.

Each track has its own volume and pan controls, and you can record this data into a track – it responds to normal MIDI data – enabling you to create automated mixdowns. Yes, the controls change in real time during playback, too.

You can perform a digital mixdown simply by gluing together sections in the Arrange page. This is non-destructive but it creates another file on the disk.

MISSING

Logic Audio was originally developed for the Mac, and the Falcon version lacks a few of the Mac's features. You might think the greatest omission is the Audio to Score function which takes a monophonic audio line and converts it to notation. However, the signal needs to be clean (forget your overdriven guitar solo) and it can't handle any trace of polyphony so perhaps this isn't such a great deal.

There is no Groove Machine so you can't quantise a section of audio to make it swing. Also missing is the Quantise Engine but that isn't implemented in the Mac version yet. A sadder omission is the lack of EQ controls in the audio mixer due, no doubt, to lack of processing power.

For the few missing items, *Logic Audio* for the Falcon is some £140 cheaper than the Mac version. That looks a pretty fair swap but remember that you need the *Logic* sequencer too.

VERDICT

Running *Logic Audio* on a standard 4Mb Falcon prevents a few functions from operating fully – it couldn't even load one of the *Logic* demo MIDI Files! Also, it insists on having enough free disk space to record one minute of audio so if you're using the internal disk you may have to repartition it.

It's also very fussy about which desk accessories it runs with. Don't use any is my advice, although using the TOS file selector is a pain beyond endurance. Apart from conflict problems, the program only locked up once during the time I used it and that was when it ran out of disk space while trying to undo a process.

The package looses brownie points documentation-wise: there are addenda for both the *Logic* sequencer and the *Logic Audio* manuals and the main manual is essentially that for the Mac! Whatever happened to the excellent clip-in *Notator* manual to which updates could be added easily? Ah yes – *Cubase* adopted it! But the program's integration of MIDI data and digital audio is excellent. There is still room for development but the system is eminently usable. You can produce quality recordings even on a basic Falcon (possibly limited by the Falcon's resources) and if you're already a *Notator* or *Logic* user it's the next *Logical* step!

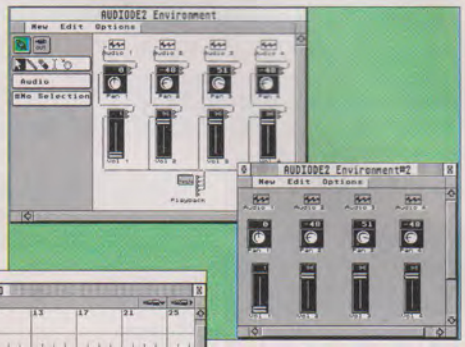
THE LOGIC OF IT ALL...

The *Logic* sequencer combines some old ideas with lots of new ones. It has an Arrange page similar to that of *Cubase* (and as adopted by many other sequencers, too) which is undoubtedly the most popular and intuitive sequencer front-end yet devised.

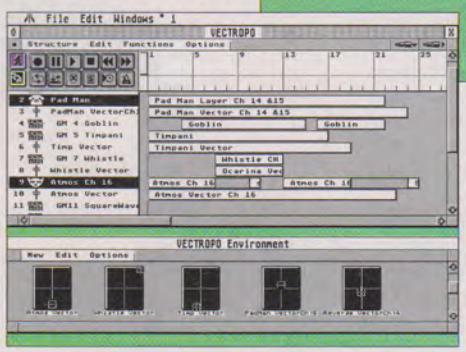
It has Event, Score and Piano Roll editors plus the Hyper editor which is ideal for editing Controller data and useful for creating drum tracks. Perhaps strangely, *Logic* has no Drum editor.

Other windows include the powerful Transform window (developed from Notator's Transform function) and the intriguing Environment window. Here you create a virtual MIDI set-up linking your instruments and outputs using virtual patch leads.

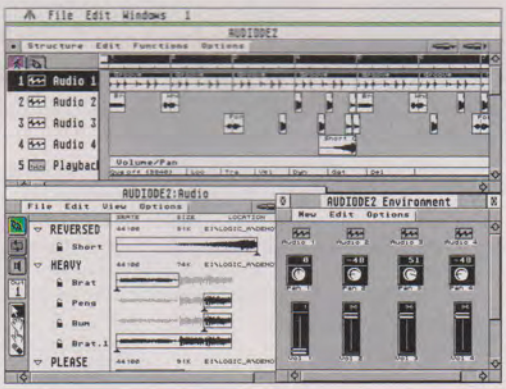
You can also patch in several processing tools such as an arpeggiator, a mixer, a delay line, a voice splitter and various others. It takes a little getting used to, but it's incredibly powerful. *Logic Audio* uses one level of the Environment to set up volume and pan controls for the audio output.



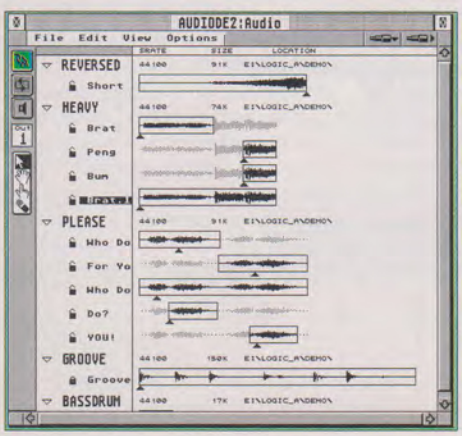
Create volume and pan controls for the audio tracks from the Audio Environment window. The lower window shows how you can hide the connections to create a more aesthetic set of controls.



One fascinating and powerful use for Logic's Environment page – the creation of vector synthesis controls for any synthesiser!



A typical working layout for Logic Audio showing the main Arrange window, the audio regions and the audio mixer.



The Audio window shows the audio files on disk and the regions you have created from them.

SUMMARY

GOOD POINTS:

Superb integration of MIDI and audio data

Powerful processing functions including time stretching

Good value for money

BAD POINTS:

May require an upgrade to your Falcon

Incompatible with many desk accessories

Manuals spread over several addenda

FINAL WORD:

"The addition of digital audio to Logic's already powerful sequencing facilities results in an extremely capable recording package that is well suited to semi-professional and even low-end professional use."

PERFORMANCE		OVERALL
EASE OF USE	✔✔✔✔✔✔✔✔✔	78%
DOCUMENTATION	✔✔✔✔✔✔✔✔✔	
EFFECTIVENESS	✔✔✔✔✔✔✔✔✔	
VALUE FOR MONEY	✔✔✔✔✔✔✔✔✔	

LET'S GET FUNKY

... with Ian Waugh's latest piece on drum patterns!

Funk came to prominence in the early '70s but continues to be popular today . Funk is largely characterised by a flowing rhythm, such as sixteenths or triplets, with the hits spread across various drums. In other words, there is rarely a constant hi-hat pattern and the snare is hardly ever placed on beats two and four as it is in rock.

If there is no solid accent on the beats, especially two and four, then the pattern can take on a syncopated feel. The stressed beats can occur anywhere in the pattern which is what gives Funk that "jerky" feel.

We're using *Cubase*'s Drum editor to illustrate the one-bar long patterns. Note the grid size which shows you the divisions of the beat the hits fall on. The darker the hits, the greater the velocity. Some drum units are more sensitive to velocity than others so you may have to make adjustments for your own system.

FUNK IT UP

Figure 1 gives an example of the basic technique, although this does have a snare on two and four. You'll notice that most of the pattern consists of a string of sixteenth notes but the different sounds create their own rhythms inside the pattern. The 1/32nd hi-hat and snare hits add interest but you could remove the second 1/32nd hit in each case.

Figure 2 doesn't have the snare on two or four and although there is a solid hit on beat four, it's played on a lo tom and open hi-hat in unison.

Figures 3 and 4 form a two-bar pattern similar to the famous drum pattern in Paul Simon's *Fifty Ways To Leave Your Lover*. Notice the 1/32nd notes that play an important part in creating the feel of the rhythm.

Many Funk rhythms are based on triplets and began when drummers in the '70s tried beefing up swing patterns. A common technique is to play a swing pattern on the hi-hats and let the other drums form rhythms around them. Funk triplets has evolved and found its way into many kinds of modern music such as Rap, Rave, Hip Hop and so on. Figure 5 is quite a complex triplet Funk pattern. Note first of all, that the relative volumes of the drums is very important. The snares should be well down in volume so they are only just audible. However, the snare on beat two and the snare and bass on beat four should be accented to provide a point of reference. The hi-hats play a broken swing rhythm and should be quite prominent. The bass drum plays a Danzon rhythm similar to the one used by the Stones in *Not Fade Away*. Try it at around 100 bpm. Figure 6 is a very busy rhythm – it even sounds busy when played slowly! Notice the accents on beats two and four and the first snare of beat three. The hi-hats are playing straight 1/8th notes and it's the double hits on the bass drum that give the pattern its busy, heavy feel.

A complete change of scene and pace next month when we look at some Latin rock patterns including the infamous Lambada...

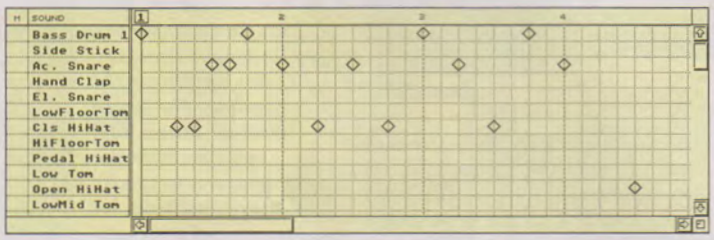
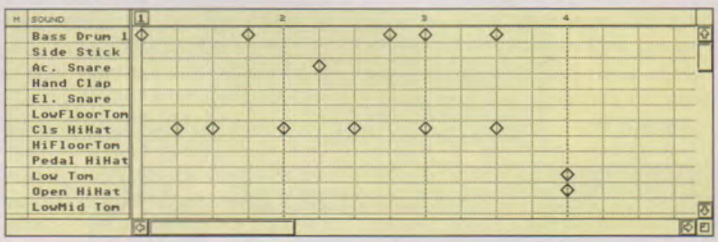


Figure 1: a basic Funk rhythm with 1/16th hits on various drums flowing across the pattern.

Figure 2: the lo tom on beat four gives this pattern a different feel.



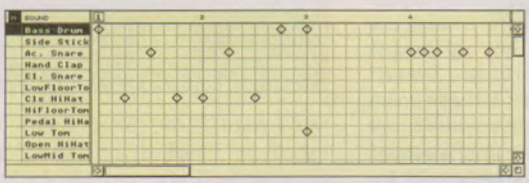


Figure 3: the first bar of Paul Simon's Fifty Ways To Leave Your Lover...

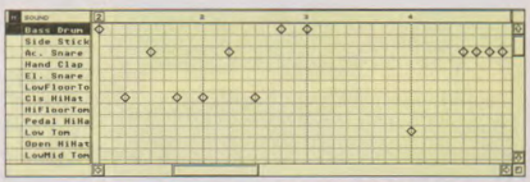


Figure 4: ... and the second bar. The 1/32nd notes play an important part in creating the feel.

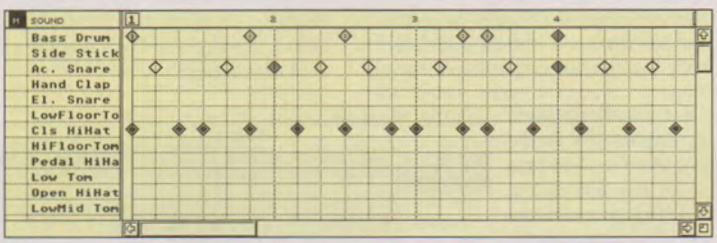


Figure 5: a complex triplet Funk pattern. The note velocities are crucial to its effectiveness.

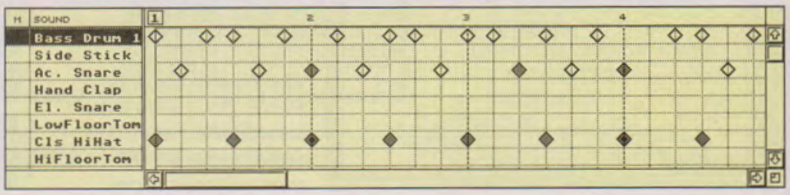


Figure 6: a very busy Funk pattern, even when played at slow tempos. The accents are important.

TOP FUNK TIPS

- **Most of the patterns here are "raw" Funk. A lot of Funk is based on swing rhythms so to create your own Funk patterns, start with a swing and funk it up. Most swing patterns get their swing from the hi-hat and you can leave these or remove them as you wish.**

- **A lot of the drum sounds in Funk patterns are quite crisp so don't use a snare with a lot of depth or reverb.**

- **If the snare is too prominent, try substituting a different drum sound such as a side stick (rimshot), hand clap or something more exotic such as a bongo.**

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INSIDE

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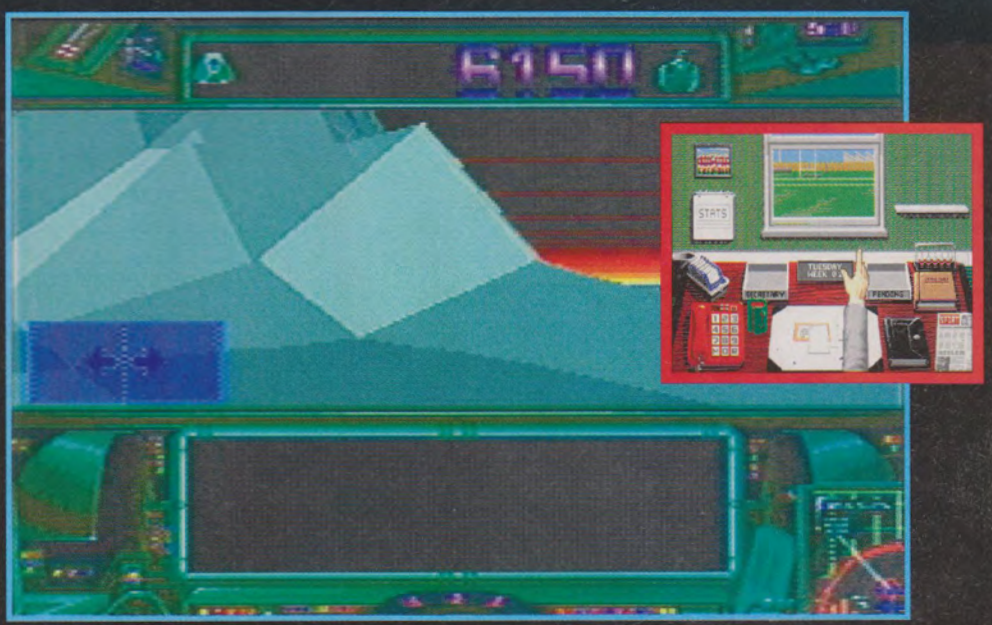

JAGGED EDGE

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UP AND

Get ready for take off as Tina Hackett hops into her go-faster striped spaceship to take a look at Caspian's Zero-5...

GAME PLAY

London software house Caspian Software has dropped seaside shenanigans in favour of a more hi-tech pursuit: the space age to be exact. The developer of the puzzler game *Rock 'N' Roll Clams* has just released its latest venture into the world of ST software – *Zero-5*.

It's STe and Falcon specific so it produces some pretty stunning effects, taking full advantage of the machine's hardware. DMA sound, Blitter scrolling and digitised speech are just some of the features that await you in this shoot'-em-up.

A space setting? It's hardly an original concept for a game admittedly, but once you load up *Zero-5* you will see that there's more to it than meets the eye.

While the storyline is lacking in originality, it's not exactly crucial for this kind of game. In brief it goes something like this: a new quantum particle, the Muon, is discovered, a high energy thingy that could provide an alternative energy source. Scientists develop the first Muon acceleration chamber which results in a conflict between the fuel and energy companies versus the government.

This leads to some probes being launched into outer space to see if there is anything out there, which inevitably there is...

The lowdown on your deluxe Perseus space cruiser...

Missions down on the planets' surfaces provide variety.

LIVING DAYLIGHTS

Whatever the story-line, it all results in roughly the same thing: you pilot a spaceship around the galaxy, blasting the living daylights out of anything that gets in your way!

You have just finished your pilot training and (in best car salesman voice) you can now be the proud owner of a Perseus space craft that uses the latest Hyper Corporation Muon drive and can travel at 89.112% light speed. The weapon with this particular model is a HitPak-Kenetic Mk2 pulse particle beam and each bolt of charged particles is able to deliver a 305.68 TerraWatt energy release over a 3km range (*Oooh... Ed*). Sir will also see that shielding of the craft is formed via Muon-energy-capacitance. A snip at half the price!

At first it's quite a weird game to get into. The action is viewed from an "inside the spaceship, looking through the windscreen" (or whatever the spaceship equivalent is). Control is via an Atari power pad or mouse – play it for a while and it all seems to fall into place. Control becomes instinctive, and it's not long before you're flying round, looking for alien spaceships on your radar and, with a press of the mouse button, blasting the enemy.

KNOW YOUR ENEMY

And just so you'll know the enemy when you see them, there's a section describing the spacecraft, how easy they are to defeat and all the other important stuff you need to know. All this is shown through great polygon graphics and an authentic computer terminal look.

The actual space environment has been well created – flying forwards is very realistic. On the missions, you get to fly to various planets and there's some excellent polygon graphics creating the 3-D effect. And

How annoying – enemy fighters have different flight patterns...

The story board intro gives you the lowdown on your mission.

KEY FACTS

Product:
Zero-5

Company:
Caspian Software

Contact:
0181-880 4450

Price:
£24.99

SYSTEM

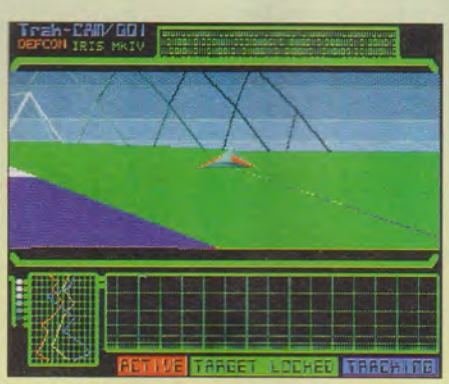
Minimum Memory:
1Mb STe/4Mb Falcon

Resolution:
ST low

Computer:
STe/Falcon

AWAY

Polygon graphics create a great 3-D environment.



Track down the enemy and shoot, shoot, shoot!

Check on the enemies you'll be up against.

for the Earth, Caspian has used bit-mapped graphics to create the planet's surface. A lot of attention has gone into creating the introduction which sets the atmosphere nicely. The story is conveyed through another computer terminal and provides pictures with a narrative of the events leading up to your mission. *Zero-5* also gives you a brief history lesson with pics of John Kennedy, following the first moon landing and then the ultimate question, "Is anybody out there?"

Sound is quite superb with excellent music throughout and some smart digitised speech (if you have more than 1Mb of memory). Music is by Dave Newman of *Sleepwalker* fame. When you're actually in battle and the enemy spacecrafts are flying at you left, right and centre, you do get a real sense of excitement. The graphics as the ships fly towards you are pretty astounding and when they explode – wow! Sound-wise you get to hear a good blast and with the colourful explosions you get that satisfying gloat of wiping out the enemy.

However, there are a few problems. If you play the game from a single floppy drive, you get plagued by lengthy disk swapping, although those of you with a hard disk or second drive won't be affected. The game ends after only three lives are lost – without any "save game" option – and creating pilot databases also seems to be more fiddly than it needs to be.

TAKING THE P.I.S.

Zero-5 is a huge game. Caspian Software will be bringing out mission disks for when you've tried your skills on the 16 available. Also, there is PIS, the Personal Image System where you can send your photograph in and have your own personalised Status disk so that you appear in your own game! Hmm, it could start a trend – maybe platform games will have you appearing as the main sprite or someone'll come up with an adventure where it's your own ugly mug that appears as the dashing young knight!

VERDICT

Overall, the game is definitely worth a bash at. Even if you already have millions of shoot-'em-ups, *Zero-5* offers a different concept to the others. There's no other game like it on the ST and for this reason alone it's definitely worth a look.

Once you're into the game, the gameplay is very addictive and there's lots of missions to provide longevity. It's nice to see a shoot'-em-up that doesn't pretend to be something else.

By that I don't mean it's easy, but if you're the type that prefers the trading parts in *Elite* rather than the blasty bits then this might not be your cup of tea. The difficulty level is about right, with the levels becoming increasingly harder, so shoot-'em-up fans, dive out for a copy and you'll be guaranteed hours of blasting mayhem!

SUMMARY

GOOD POINTS:

Polygon graphics create the space environment well

Digitised speech is used to good effect

Explosions are well created giving a satisfying blast-'em-up feel

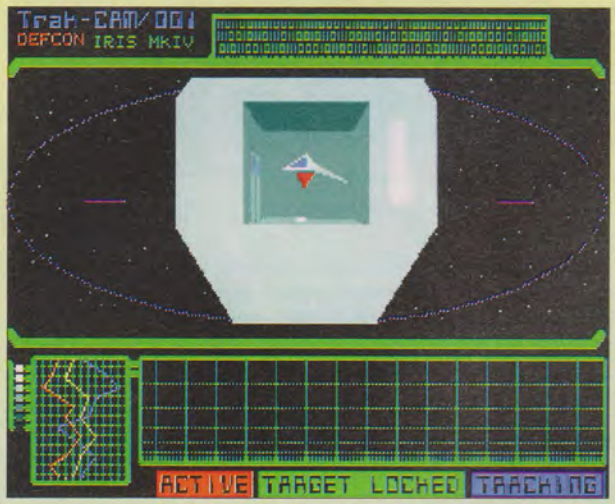
BAD POINTS:

A fair bit of disk swapping for single floppy users

Laser fire accuracy can be tricky at first

FINAL WORD:

"Zero-5 is quite unique as far as ST shoot-'em-ups are concerned with great graphics and sound. Highly playable – well worth buying."



The launch sequences are well worth watching!

Your advanced weaponry is a fair match against the aliens.

PERFORMANCE

GRAPHICS	10
SOUND	10
VFM	9
PLAYABILITY	9

OVERALL 86%

WE HAVE LIFT OFF!

Is Zero-5 the best shoot-'em-up of all time? Vic Lennard leads the way with our exclusive cover disk version...

There's little doubt that the appearance of *Frontier Elite* caused more than a slight stir among the Atari fraternity, but many found the battle side to be a little disappointing. The original *Elite* on a BBC B with a green-screen monitor – now that was tough!

Only one word need be uttered while playing *Zero-5*: kill! With no ability to either change speed or reverse, there is certainly no attempt to hide the fact that this is a shoot-'em-up, pure and simple. But rather than steal the thunder from my games editor's review on page 50, let's see what our cover disk version offers you.

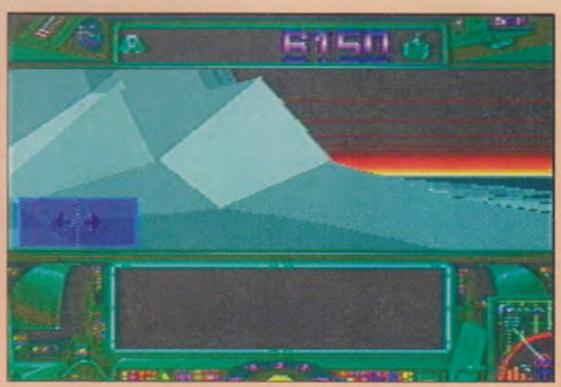
GETTING STARTED

Zero-5 requires either an STe or Falcon with 1Mb of RAM or more. Set the video mode to ST low or medium and double-click on *ZERO5.PRG* to get started. That's it, but do use a "clean" system without desk accessories or auto programs.

You'll be presented with the *Zero-5* scenario of mankind reaching for the stars and finding that there's someone else out there – the Morphons! After the various images finish, the music starts and you're presented with a choice of mouse or joypad. Choose accordingly and the *DEFCON* main screen appears. Of the eight possible options, four are active – and if you stare at the screen for too long, *Zero-5* reverts to the initial intro. No worries: just hit the right mouse button and you'll return to the main screen.

It's worth clicking on *Enemy Data* to see the kind of ships you're up against: scroll through these via the up and down arrows. You'll meet the first two, Saucer and Clam, during this mission while the rest will make their presence felt in the full game!

Let's get down to business...



Try to avoid the mountains when you come down to the planet's surface...

Enemy craft are coming – so get ready to blast 'em as soon as they're in range!

THE MISSION

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In the centre of the screen is the main window; to the bottom left is the HUD (Head Up Display) that provides a zoomed-out view of enemy craft. Red dots mean that the enemy craft are out of range – turn your craft around to meet them. Hit the right mouse button to see the Long Range Tactical Scanner for more info on the enemy positions. You'll find a whole load of Saucers flying at you – hit the left mouse button and kill!

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FALCON 030

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RGB or VGA - Indicates the type of monitor required to run a specific Falcon program.

ART & GRAPHICS

S-ART.4514, S-ART.4515 & S-ART.4516 POV Raytrace 2 - The complete system supplied ready to run. Simply the best in raytracing. Beware of incomplete versions supplied by others! £5.25.

ART4635C ECLIPSE - The very best in image processing on an ST/E! Simply packed with features. Also on disk are a number of fast fractal generators.

ART.4642M MultiCAD - The best Shareware CAD package on the market. The ideal tool for planning that new kitchen or designing an extension to your home.

ART.4772 ARROW 24 - An easy to use GEM based modelling and raytracing package.Leaves POV standing! NOTE: Program and docs in German. Needs 1 Meg.

ART.4774C STIS - Creates 3D images from Degas pictures! IFP - Display long scrolly pics on your ST. EASY POV - A nice easy to use GEM shell for POV Raytrace.

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EDU.4588C PICTS TO PARLIAMENT 4 - A humorous look at history from the days of Edward IV to the head chopping Henry VIII! Parts 1 to 3 also available.

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FWG.04C POWER CUT by Paul Abraitis - Using your jetpac, fly around the complex and destroy the 25 power bases against the clock. Needs 1 Meg £3.00.

FWG.05C CASTLE CAPERS by Paul Abraitis - An amazing platform game set in a haunted house. Can you survive the 50 levels? Needs 1 Meg. £3.00.

FWG.06M COLOUR TO MONO CONVERTER by Chris Skellern - Uses a choice of 16 algorythms to convert colour pictures to mono for Desktop Publishing. £3.00.

FWG.07C DARKLYTE 2 by Howard Tilley - A Sci-Fi space action/arcade adventure/strategy game. Incredible graphics and sound effects. Needs 1 Meg. £3.00.

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FWG.18C Murder On The Orion Express by OCL - A mouse driven Cluedo style murder investigation (not a graphic adventure). Full of humour along the same lines as Dead Or Alive.£3.00.

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FWG.20C THE SENTENCE PROGRAM by Ian Holden - A fun educational game aimed at youngsters learning to put sentences together. £3.00

FWG.21 POLYMATH by 'Fast Eddie' Stansfield - An integrated mathematics program for higher education students. Features a scientific calculator, graphing facilities, generation of waveforms etc. Needs 1 Meg. £3.00

FWG.29C WORD WIZARD by Nice Bytes - A word game featuring over 40 rounds of play. Includes bonus and gamble options to spice things up. £3.00

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GAM.4692C 180 - A great darts simulation which allows you to play against different computer controlled opponents. Two more great games also on disk

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GAM.4770C MAGNOBALL - Totally wicked one or two player fast action game. Hit the ball into your opponent's moving goal! Two more great games on disk.

GAM.4771C PIPETRIS - Across between Tetris and Pipe Mania! PLONKER - A playable demo of a crazy match it game. MAX - A frustratingly addictive platforms and ladders game.

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MID.3352 Fifteen song files in PRO 24 format and another nine in standard MIDI file format.

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UTL.4832 TEKTONIX SHAREWARE DISK - A collection of about a dozen useful programs, many with full GFA Basic source.

FALCON 030 SECTION

We were the first to support the Falcon and now have over 300 HD disks in our library. The Falcon catalogue costs £1 on its own or just 50p if ordered with other software. Falcon disks cost £2.50 each unless otherwise stated.

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F.4786 ARROW 24 - An easy to use GEM based modelling and ray tracing package. Leaves POV standing! NOTE: Program and docs in German. MPEG PLAY - Plays MPEG real-time movie files. TGA VIEW - Double click TGA files to display them.

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F.4869 ECLIPSE - A powerful image processing package with a good range of features and extensive file support. Also on disk are two very fast fractal generators, two MPEG animation players, two JPEG decoders, a very fast GIF viewer and Indy Paint - a graphics package.

DEMOS

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S-F.4855 & S-F.4856 124 BEERS LATER by TRIO - An impressive guitar track kicks this one off, followed by a range of great graphic effects & music. RGB ONLY. Needs 4 Meg and a hard drive. £4.50

F.4857 ARE YOU EXPERIENCED by EKO - An impressive animation of a starwars type battle, followed by great special effects. RGB ONLY. Needs 4 Meg.

F.4859 MOSTLY HARMLESS by MJJ Prod - One of the best demos on the Falcon. Lots of special effects. Even the greetings are impressive! RGB ONLY. Needs 4 Meg.

F.4861 HIGHWAY STAR DEMO by PLPL - Concentrates on the use of a new breath-taking graphic effect using beams of light, fractals and shaded bobs. You just must see this one! RGB ONLY. Needs 4 Meg.

GAMES

F.4456 SHANGHEI V2.0 - Perhaps the best implementation of Mah Jong to date. VIERFREI - A variant on the card game patience which has 999999 startup positions! MEGATRON - A 2 player light cycles game with 25 levels. Three more games on disk!

F.4579 BLACK HOLE - Arcade action with lots of digitised sound. Can you find the coins on each level that hold the key to the next? Watch out for the timb bomd, though! VGA, needs 4 Meg.

F.4791 DYNABUSTERS - Place sticks of dynamite strategically to blow up walls and destroy other players. WYRD WAYS - Battle it out in a combat arena set in a maze which is constantly changing! MIND MELT - An RPG game set in a mystical land.

F.4779C STARBALL - A futuristic Pinball game with great sound, graphics and several sub-games. This HD version features several more digitised tracks than the ST version and is Falcon enhanced.

F.4780C NoBI BRAINSTORM - Guide Alfred the snake around numerous levels collecting all the Yin Yang symbols. Great Fun! Needs 4 Meg. NoBI RACING - Another Alfred the snake game! Lots more puzzles and traps and two players can take part. Needs 4 Meg. YUKON - The best game of patience you've ever played!

F.4781 SHOCKER 2 - House of Games - The Falcon specific version of a great game of skill. Many levels available and lots of puzzles to solve. TOMTAR - A crazy fast action blast 'em up with a machine gun!

F.4868 BERZERK - A re-enactment of an age old classic robot warfare game. MAGNO BALL - A fast action futuristic type game from the makers of Towers. OXYD RGB - A version of the classic game which has been adapted to run on an RGB monitor (or TV).

PROGRAMMING

F.4784 JPEG4SRC - The complete C source and docs to the latest revision of the JPEG file format. FALCON LIBRARY - An impressive collection of well documented assembler sub-routines (Devpac 3 format) for use in your own programs. WIN LIB PRO - C source for a slick new 3D Desktop. Still under development but plenty of docs and source.

F.4724 EASY GEM LIBRARY - Everything you need to add an impressive futuristic front end to your own GEM programs. Includes full sources in Pure C format.

UTILITIES

F.4555 AHDI CONFIG, ARROW FIX 1.3, BROWSER, EVEREST 3.4, CD-ROM DRIVER, GAMEFIX, GAPOSCAN, ICONEDIT, OCR, TOS4TRAP, VOXMAIL, FALC VOLU.

F.4727 HPLJ4L - Gives you full control over all the features of the HP LASERJET 4L from within an easy to use GEM program. Lots of downloadable fonts included.

F.4782 ASSIGN-ED, BMAPFIX2, SET TIME, CPXSPY, DOPPELCLICK, EGALE, DR BOB'S ICON EDITOR, RSC_XPAND, ICON PAGER, WICOPAGE, ST GUIDE, E_DICT, POWER MOUSE, TERMINAL BLANKER, TOS 4 FIX, VERICARD, WHATIS.

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F.4864 SPLITTER, GREPIT, GHOSTLINK, EGALE, CD LIST, MED NET, ATARI WORKS TEMPLATES.

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Access

The latest Calvin Klein aftershave? Nope – Obsession is the nifty new pinballer from Sweden's best. Tina Hackett is the Pinball Wizard...

COMPLETELY OBSESSED

I don't normally resent having to work on my Mac to report on the latest game I've just tested, but today is an exception because I've had to drag myself away from one of the finest games it has ever been my pleasure to play. Most of you will have played our cover disk version of *Obsession* last month but there's more – much, much more.

Obsession is a highly appropriate name because it really does sum up the effect this game has on you. As it's a pinball game, and purely for research purposes, I took myself off down to the pub for a real game! (*oh yeah... Ed*) Then I played *Obsession*. Absolutely stunning – we're dealing with a modern-day masterpiece in computer game form. It's deadly, it's obsessive and it's taken STe gaming to dizzy new heights.

KEY FACTS

Product:
Obsession
Company:
Unique Development Sweden
Contacts:
Merlin (01453 882793)
JCA Europe (01734 452416)
Price:
£24.95

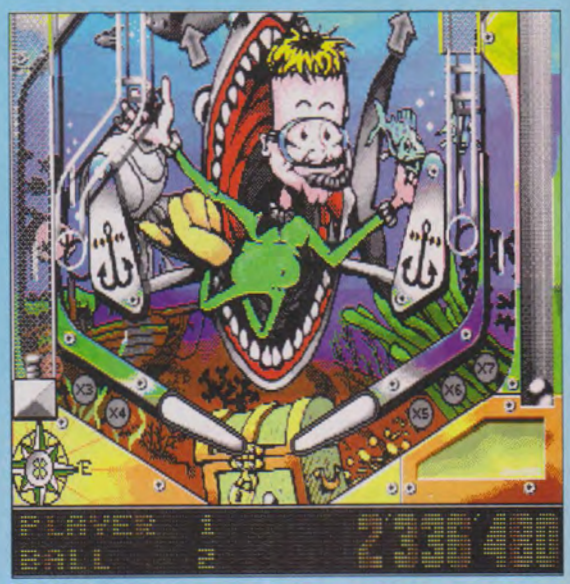
SYSTEM
Minimum Memory:
1Mb
Resolution:
Low
Computer:
STe (Falcon compatible)

GUIDED TOUR

The game comprises four tables, each one beautifully themed with different objectives, backgrounds and all kinds of related sound effects, tunes and novelties. A great deal of thought and care has gone into this game.

Aquatic Adventure, the level we used on our cover disk. The storyline of this water-based level goes something like this: Bobby Bubble is an adventurer and has stolen Captain Notpolite's secret map to find hidden treasure. Bobby, clad in his diving gear, heads into the water but finds that the Captain is also down there in his stealth submarine! There are five missions to complete and each one earns you a certain number of points: up to 10,000,000 for Submarine Hunt or you can light up "PEARL" to activate the Million Hunt.

GAME PLAY



The tables are drawn in layers which gibes them a highly realistic look.

Then it's on to *X-ile Zone* which takes you to a future age after a nuke attack. The objective is to kill the enemy tribe leader but there are nine missions to complete before you can do this. Everything from deactivating security to stealing security cards is in your hands. You can go up the Berserk Ramp to activate berserk mode; during 15 seconds, you must enter the ramp again and get through a gate to increase your points or the bonus multiplier.

Third up is another completely different scenario: *Balls & Bats*. It's the World Series and with baseball

The tables all have a theme – and the sound effects tie in as well!

The table is shown over two screens. Scrolling is so smooth that there isn't any noticeable flicker.

THE FAB FOUR!

Pit your skills in the ocean with Aquatic Adventure. When a new ball is launched, try to shoot it into Dolphin Passage for two million points!

The pick of the bunch – Balls & Bats uses a Baseball scenario with the flippers acting as bats. But make sure you don't get three strikes or you'll be out!

Desert Run is certainly not for Sunday drivers! Get the ball around the track, in at the pit stops and re-fuel the gas. High scores if you finish first or second!

Futuristic X-ile Zone – complete the missions and assassinate the tribe leader. To complete a mission, light "DEATH" and shoot the ball into the Mission ball trap.

bat at the ready, you have to win it. The table is the baseball field and there are two modes, namely Normal and Pitching. The pitcher throws a fast, slow or curve ball and by directing the flippers, as bats, you hit the ball. Enter the Home Run passage to get around the bases – light all bases to win the match.

Desert Run is the fourth table and this time it's a car racing theme. There are pitstops to light, fuel units to be bought and money up for grabs according to your speed. Once you have enough money, you can enter the petrol station to buy your gas. And to get the highest score possible, you need to finish every stage in first or second position.

BEES KNEES

Each table is completely gob-smacking. You play one and think it can't get better but then the next table follows, and the next. Wow! Scrolling is silkier than the woman's hair in the Timotei ad, and the jaw-dropping graphics and sound effects are witty enough to bring a smile to even the most miserable of faces. The music is stunning too!

Graphics ooze quality out of every pixel and each table creates the four settings brilliantly. The different themes ensure variety and the designs look original and fresh. The *Balls & Bats* table, for example, takes on the form of a baseball field, with illustrations of baseball cards and hilarious sound effects like "Strike one" and "You're out!".

There's also a nice range of options. Up to eight players can take part and you can toggle the music, jingles and sound on and off (not that you'd want to!), alter the LED panel size or whack in the bass boost. Controls are very responsive, making for an authentic game of pinball.

The graphics look extremely modern and fresh, a mixture of cartoon style and "street art" graffiti...

But in time-honoured fashion, I do have a "reviewers whinge", even in a game that gets as close to perfect as this! *Obsession* would certainly benefit from a multi-ball feature and possibly an extra level of flippers added to the table. However, this doesn't detract from the game in any way.

VERDICT

Some of you may be thinking: "Well, *Starball* is good and much cheaper!". Pay yer money and take yer choice – but against *Obsession* there is just no comparison. It's like matching a fine malt whiskey against a bottle of cheap McDougall's home-brew. It's fine for a quick hit but you need quality to really savour the moment.

The guys at Unique Development Sweden can really slap themselves on the back. *Obsession* is pure class and totally timeless. We'll still be playing it in five years time, so don't even think about it – just buy it!

SUMMARY

GOOD POINTS:

Sumptuous graphics that'll take your breath away

Pushes the STe's hardware to its absolute limits

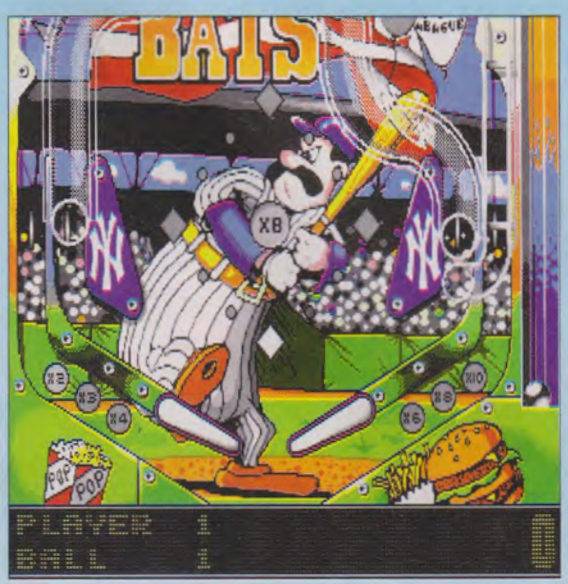
Addictive gameplay that makes you want to play again and again...

BAD POINTS:

No multi-ball feature or double set of flippers

FINAL WORD:

"The best ever Atari game! It really is an absolute Obsession!"



Obsession is more than just a good-looker – gameplay by the tonne-load!

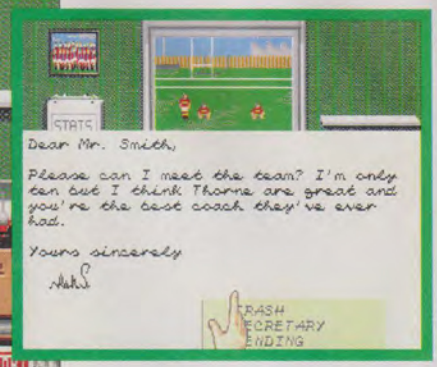
PERFORMANCE		OVERALL
GRAPHICS	★★★★★★★★★★	98%
SOUND	★★★★★★★★★★	
VFM	★★★★★★★★★★	
PLAYABILITY	★★★★★★★★★½	

KEY FACTS

Product:
Rugby League Coach
Company:
Audiogenic
Contact:
0181-861 1166
Price:
£29.99

SYSTEM
Minimum Memory:
1Mb
Resolution:
Low
Computer:
ST/STe

All the important decisions are made from your office.



Sorting out the fan mail becomes rather tedious...

RUGBY LEAGUE COACH

Tina Hackett jumps in the communal bath, sings raucous songs and practises her role as Rugby League Coach...

Over ten years in development, *Rugby League Coach* is finally here – but has it been worth the wait? To be honest, I'm not the world's greatest Rugby fan. In fact, all I know is that it involves big, sweaty muscle-bound men sprawling around in mud, but I took a crash course in the rudiments of the sport before writing this review!

What's the background to the game? You begin as the coach of Thorne, a struggling third division side, and it's your first bash at coaching after a playing career that came to an abrupt end after an injury. But this new position is no "cop out" – as well as all the usual problems, there are 35 other coaches who manage the clubs in the three divisions that you are competing against.

But to win, success or failure ultimately lies with your players and how well you've trained them. Much is down to their morale. If a player is unhappy he is unlikely to play to the best of his ability. As a manager, you must keep your squad happy but there's a balance; spoil your players and they may become lazy, while overworking them could cause injuries and make them resentful.

A lot of your job also depends on how you handle your finances and your decisions on buying and selling players. You have to check the transfer lists regularly and keep an eye on up-and-coming players, even those who aren't for sale. You can always send your scout to have a look at anyone you're interested in. All this is carried out from your plush managerial office. You have a telephone to receive vital info, a team file, a stats file with all your financial dealings on, and a newspaper which is more useful than you might think as it provides all the gossip plus reports on all the matches that week and the situations vacant. You also have the all-important personal organiser with the forthcoming fixtures and club details on all the players in the league.

When the actual match day arrives, the results service gives you the constantly-updated scores from the other matches and the score from your own match is shown as it happens. You have to make substitutions; by looking at the assistant coach's clipboard, you can see how he rates the performance of each player. If a player is injured, and the assistant coach shakes his head, he has to come off and you must choose a substitute.

Don't forget to pick the team before match day. The coach states whether a player is improving or not to help your decision.

GAME PLAY

VERDICT

And that, if rather briefly, is the game. But unless you actually live, sleep and breathe Rugby League, you are unlikely to find this more than a blatantly average management game. It does have its moments but your actions are very limited and the fiddly operating system becomes nothing short of frustrating. For example, the 'phone rings and you happen to be reading the latest info in the paper. You have to click off screen after screen to answer the 'phone, and by this time it has stopped ringing anyway! Also, you have to remember where all the different screens are as most of them are hidden tidily away somewhere. Another irritating point is that you can't make outgoing calls except to bid for other players, and a lot of the time you have to keep dealing with fan mail (or rather "scrounge mail" from those who write to the club saying how good you are and then ask for a free ticket!). This could have made a nice touch to the game but it just happens too often!

There are some good points, such as when other coaches ring to bid for your players or setting the training schedules for your squad. And each of the players have different personalities so have to be treated differently. But when it comes to the actual match, it fails to create any real excitement despite quite a reasonable crowd effect. Yep – it's fair to say that this is a game for Rugby League fanatics only...

PERFORMANCE		OVERALL
GRAPHICS	★★★★★☆☆☆☆☆	55%
SOUND	★★★★★☆☆☆☆☆	
VFM	★★★★★★☆☆☆☆	
PLAYABILITY	★★★★★★☆☆☆☆	

GAME PLAY

ROBINSON'S REQUIEM

Tina Hackett is on another planet once again as she takes a look at the Falcon version of Robinson's Requiem...

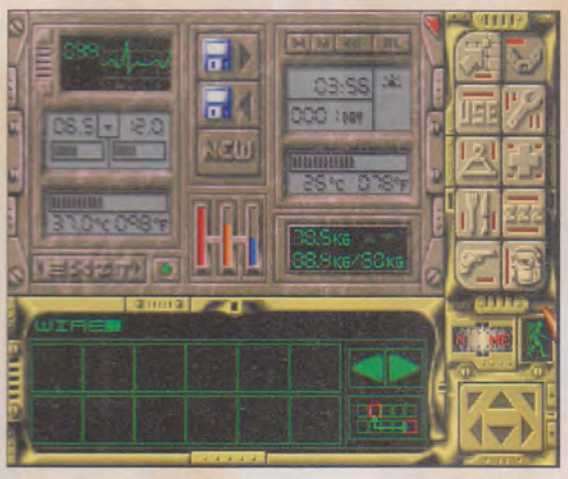
No, it's not *déjà-vu*, but I'm sure that the more astute among you will be thinking: "Didn't they review this last month?" It's not a memory lapse on our part – this is the fully enhanced Falcon version of Simarils' survival game.

If you aren't familiar with this new and impressive game, it's worth grabbing last month's issue and taking a quick scan over the basics behind it. If you don't have the last issue (ooh, you foolish person, you) then I'll explain.

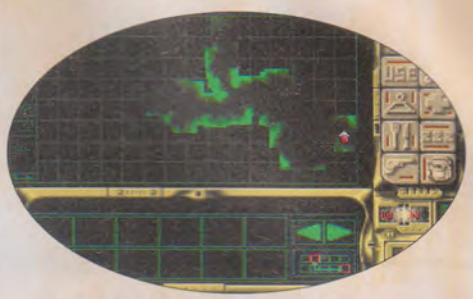
GOOD STORY LINE

Robinson's Requiem is a survival simulation – and don't be put off by the "Sim" word because it's a damn fine game. The story line has you as a Robinson agent whose job has been exploring unknown planets. You've been promised a golden retirement on earth but the government has decided that as you may have come into contact with viruses, you should meet your end on the planet Zarathustra. Needless to say, no one has ever returned from here (*that's gratitude for you... Ed*).

You are walking around a hostile environment trying your best to survive with limited resources. Luckily, you picked up a medical kit from the wreck of your spaceship and can keep your health in tip-top condition by combining this with your personal computer. Ultimately, you must escape from the planet – and gripping stuff it is too!



Keep an eye on your health. This gives you all the info you'll need from heart rate to temperature.



In true Blue Peter style, you have to use your ingenuity to make things.

KEY FACTS

Product:
Robinson's Requiem 030
Company:
Daze Marketing
Contact:
071-372 7545
Price:
£32.99

SYSTEM
Minimum Memory:
1Mb
Resolution:
256 colours
Computer:
Falcon only

VIVE LA DIFFERENCE

The first thing to stress is that this is the same game as the ST, but it takes full advantage of the Falcon's hardware. Straight away you notice the improved intro sequence which has been lengthened to include the complete spaceship animation.

Into the actual game, 256 colours are used and the Falcon's sound chip pumps out the eight-track stereo sound. Gameplay on the ST version was marred by the rather slow running nature of the game. The Falcon version plays slightly faster although this still doesn't eliminate the frustration of a rather fiddly and slow walking system.

And still the rather dodgy collision detector remains. For example, you can walk straight through a tree but you can't walk over small rocks! But with the improved graphics, you get a better sense of realism and all the screens are clearer making it easier to choose an icon. The characters' animation also work better as the actual expressions can be seen.

The enhanced sound adds to the game. The background jungle-like noises increase the atmosphere and the likes of the rushing water sound more realistic. And now, if you should die, the end sequence is even more dramatic.

VERDICT

Robinson's Requiem is one of those rare games in that it is totally fresh and unusual. The Falcon version considerably enhances the original, with clearer graphics and more authentic sound effects. It is also hard disk installable.

However, it doesn't really improve a great deal on the speed which was one of our main grumbles initially.

The concept behind *Robinson's Requiem* is fantastic, though, and makes it one of the most exciting games I've played for a long time. If you can forgive the relatively slow progress in some parts then this game is highly recommended. The Falcon version can only be obtained directly from Daze.

Even the Options screen shows the attention paid to detail...

PERFORMANCE		OVERALL
GRAPHICS	9½	86%
SOUND	9½	
VFM	9½	
PLAYABILITY	9½	

PD ACTION

Christmas left you skint? Fear not, as Tina Hackett goes bargain hunting at the PD January sales...

GRAND PRIX MANAGER

FLOPPYSHOP • DISK NO: FWS 14C • £2.50 • MEMORY: 0.5MB • FLOPPYWARE • FALCON-COMPATIBLE

IN BRIEF: While I'm in my authoritative managerial mood, I may as well have a look at our second "manager" game this month.

Grand Prix Manager attempts to simulate the running of a Formula One Grand Prix team with the ultimate aim of winning the Constructors and Drivers Championships – and balance the books at the end of the season.

To be completely honest, this game is nothing short of boring! Management games tend to have a lot of tables but this is ludicrous – nearly every screen has a long, uninteresting table. Choose a team, then the driver, then an engine expert, then a Chassis expert and so on – it's never ending! By the time you've carried out all of this, the game has become absolutely tedious.

Then you have the betting section (which didn't seem to want to work on my version) and while all might be saved by the actual race, all you are given is yet another boring screen with a commentary.

ST REVIEW COMMENT: "*Grand Prix Manager* is quite a nice idea and could work well as a game concept but unfortunately this version considers nothing about presentation.

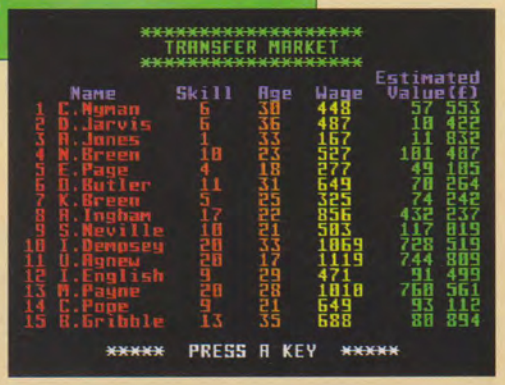
Racing fans might squeeze some entertainment from this game, especially those who are sticklers for details like trying different car parts..."

Choose your electronics expert – oh, the excitement!

Pick a driver – please, pick a driver!

Grand Prix Manager could have been fun...

There are plenty of options that provide most aspects of running a club.



The transfer market provides the opportunity to buy and sell players.

GRADUATE MANAGER

FLOPPYSHOP • DISK NO: GAM 4610C • £2.00 • MEMORY: 1MB • SHAREWARE

IN BRIEF: As the name doesn't suggest, *Graduate Manager* is all about learning to be a Ferguson, Taylor or Venables – yep, you get to play manager of a footy club and lead your side to victory.

This is the shareware version so you get to play the first 15 games of a season, but the full version allows you to play unlimited matches and gives you the option to save and load your game.

You have all the usual managerial duties to deal, you have to keep an eye on the transfer market to buy and sell players, set ticket prices and buy shares. On the match day you need to select a squad, choose tactics and decide when to make those all-important substitutions. The match is relayed through a running commentary which gives all the vital info on what's happening. Off the pitch you oversee training, make sure the club's finances are running smoothly and sack players who aren't up to standard.

ST REVIEW COMMENT: "Graphically it's far from stunning but it does have a certain charm. For example, the pitch graphics convey a rather scribbled ground but it adds to the fun feel of the game. The tables are well set out and contain stacks of info. Okay, so it might not be up to *Championship Manager* or *Premier Manager* standard but for shareware, this is an excellent attempt to recreate a fun management sim."

SPACE WARS 2000 V1.10

CALEDONIA PDL • DISK NO: GM-216 • £2.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: Blast-'em-up action this month comes courtesy of *Space Wars 2000*. Outer space provides the setting for this spaceship-style shooty and to win the game you must obliterate your opponent while trying to accumulate as much cash as possible.

Space wars 2000 is more than just your average shoot'-em-up.

However, it's not only your skill with weaponry or defensive moves that will win you the game: careful tactics and preparation of your ship all affect the outcome. When you're at the shipyard, you have to consider what you wish to buy for the ship and spend wisely.

Two to four players can compete against each other, building their ships, choosing insurance and then combat in outer space. Blast your opponents into oblivion and avoid the asteroids and your enemy's bullets – nice friendly stuff.

Ships have different components such as the engine, armour, and weapons which affect the handling and speed. You can also upgrade to auto cannons for long range shots that cause moderate damage, or expensive lasers that inflict great damage. Then there are the specials – death bombs or ramplate for halving the damage. But remember, you have to keep enough money to insure your ship.

ST REVIEW COMMENT: "A decent blast-'em-up that is bound to bring out the mean streak in you!"

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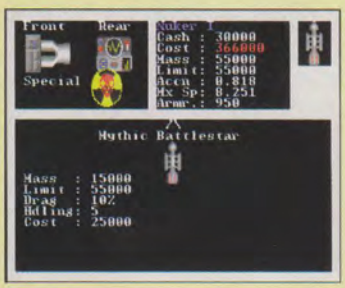
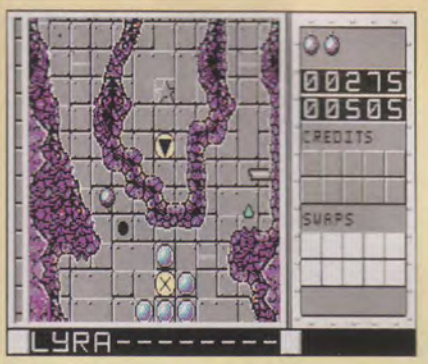


At the shipyard you're able to make those all-important changes to your spacecraft...



Don't get too close to the walls as they slow you down.

WORMHOLE

FLOPPYSHOP • DISK NO: GAM 4295C • £2.00 • MEMORY: 0.5MB SHAREWARE • FALCON-COMPATIBLE (WITH BACKWARD)

IN BRIEF: Space is a popular theme at the moment and *Wormhole* is just one of the many. This is the demo version of a vertically scrolling shoot-'em-up and the scenario goes something like this: while on a space flight to Alpha 6, your star drive malfunctions and you are sucked into a wormhole. You must escape from this alternative reality, shooting your way past any obstacle that blocks your path.

You're in a small blue space ship and have to disable machines by shooting them while avoiding the weapons they fire at you. But there is a bit more to it than this. You can find transporters around the levels to move to another part of the zone, or collect "swaps" and other bonuses.

ST REVIEW COMMENT: "This all makes for a fun mad-blast shoot-'em-up that also requires skill. Graphics convey a metallic space age environment well, but the sound effects leave quite a lot to be desired – they're pretty feeble to say the least! In all though, this is a worthwhile title and is likely to prove quite addictive."

●●●

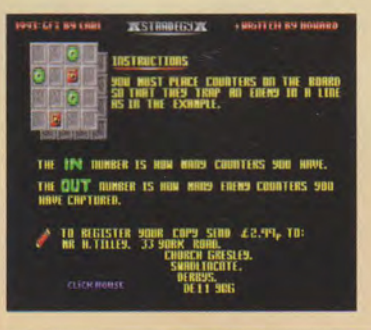
Even from launch, you must keep your eyes peeled for enemy weapons.

STRADEGY

LAPD • DISK NO: G298 • £1.50 • MEMORY: 1MB • SHAREWARE

IN BRIEF: Puzzlers are abundant in the world of Public Domain. Some are ridiculously complicated, while others just seem totally pointless. Luckily, *Stradegy* is neither of these and while it may not be the most original game in the universe, it does have that often lacking factor: fun value!

It has a relatively straightforward approach with a board divided into grids and two sets of counters. The idea is to place your counter on the board to capture an opponent. This is done by placing two of your counters on either side of the enemy, thus trapping him. But he can also do the same, so it's a race to victory on who can capture who first.



The game certainly isn't marred by over-complicated instructions...

Simple? Yes. Addictive? Definitely. Scores are awarded for both capturing counters and for how many counters you have left at the end of the level. If you manage a tricky move such as trapping two or more counters with only one of yours then you get bonus points.

As you progress, your opponents get harder. Their intelligence ratings show how tough they'll be to beat. However, you can start off with a practice mode or bring a human opponent in on the fun. Passwords also mean you don't need to start at the beginning each time.

ST REVIEW COMMENT: "There are over 25 challenging levels to complete, all of which have to be done in a certain time limit. This all makes for a very fun game and although it may not be the most stunning of titles, it does make you use your brain without being overly complex."

●●●●

Trap your opponents with your counters to score points.

JAGGED EDGE NEWS

VIRTUAL LIGHT!

The Jaguar leaps into the limelight yet again with news of a virtual reality headset Nial Grimes is on the case...

Virtual reality is the future for entertainment software and Atari has placed its stake in the 21st century by asking British company Virtuality to manufacture the Jaguar headset. Several VR games are already in the pipeline and the most exciting aspect of this development is the price – £200!

Atari's firm commitment to virtual reality and the low projected price point for the headset could mean very good things for the Jaguar. We can only hope that VR takes off a little more rapidly than CD-ROM!

THE HARD LINE

The virtual reality headset isn't the only exciting hardware development on the horizon. The Jaguar CD is now in production and with a little bit of luck should be available in the States by the time you read this. Two games will be available at the time of release and plenty more are in the late stages of development – we are promised six by the end of January. The pack-in title will probably be *Battlemorph*, the cinematic texture-mapped sequel to, you guessed it, *Cybermorph*. Atari is quick to point out that the CD unit will not kill cartridge games – it views the low price of the base Jaguar system as one of its main strengths.

Veteran ST guru ICD has also hopped aboard the fast-moving Jaguar bandwagon, with the announcement of its "Cat Box". This expansion system will provide a range of industry-standard ports and is likely to become the standard means of networking Jaguars. The cost is likely to be about £50 in this country. Atari is also working on a voice-modem to allow networked play and chat via a telephone line.

Forced by the pressure to get titles out of the door by Christmas, the next wave of games will lack networking and voice modem support. However, *Club Drive* supported both at the Chicago Entertainment Show, and it's likely that updated versions of this and other titles will appear when the hardware itself turns up. *Doom* freaks will be pleased to learn that id Software has managed to squeeze limited networking abilities into the first run of cartridges.

GAME FOR A LAUGH?

On the software front, things are definitely improving with new titles being announced almost on a daily basis. Acclaim is the latest big company to confirm its support with the leaked announcement that *Mortal Kombat II* is to be developed for the Jaguar. A networkable version of *NBA Jam* is also said to be "under consideration".

On the Atari front, almost all of the initial batch of sponsored games are now at the manufacturing stage. When questioned about the possibility of *AvP* on CD, the only reply that Atari could muster was "no official word" – intriguing! The SCES show-stopper, *Iron Soldier* is also in production along with several other third-party titles – among them, *Rayman*, *Theme Park*, *Zool 2* and *Sensible Soccer*.

Jaguar owners' thirst for good games is reinforced by the news that *Alien vs Predator* sold out from distributors on the day of release in the UK! A fresh shipment is due any time now, and in the meantime, stocks can be found in some retail outlets – Rumbelows is a good bet.

The Jaguar needs a good Christmas this year and Atari US is doing its best to make sure that it receives enough exposure. Although they can't muster the same sort of media blitz as Sega or Nintendo, reports of strategically placed *AvP* adverts are racing around the 'Net – a number of times during a screening of *Alien*!

Even with "only" twenty titles on the market, Atari is still looking in a strong position this Christmas. Games for Sega's stop-gap – the 32X – are still decidedly thin on the ground, and unless something drastic happens, Jaguar *Doom* will sway games-players firmly in Fuji's direction!

Fun 'n' games – Theme Park and Zool 2 are in production and should be available shortly.

Drivin' along – Club Drive will support both networking and voice modem...

CLUB MIX

This month sees the launch of the *Jaguar Owners' Club*, an association for 64-bit fans around the world. Membership is free and while you can't expect too much in return for your stamped-addressed envelope at the moment, the club can supply a range of interesting Jag goodies – T-Shirts, caps and mugs included.

The *Jaguar Owners' Club* is not fully official, but it is recognised by Atari and you can contact the guys at: P.O. Box 27, Borehamwood, Herts WD6 2AF.

CUTE ROUTE

FIRST IMPRESSIONS

Will Rayman be the Jag's Sonic? Graeme Rutt gets a sneak first look...

The Jaguar is, by admission of Atari UK, a "hard" system: it will feature games bedecked with suspense, blood, guts and gore. When you've been splattered with yellow-green *Alien* gunk and you've watched someone's head and torso explode in *Kasumi Ninja*, you kind of realise what they're getting at. What space is there then for a platform adventure as cute as cute can be without a single looping blue intestine or drop of blood on display?

When it's as lovingly crafted and as visually stunning as *Rayman*, I'd argue that there's a place for it in *everyone's* collection.

It's prettier than a cartoon, equally as funny and promises to feature excellent game-play. Who knows – maybe *Rayman* will become to the Jaguar what Sonic and Mario are to Sega and Nintendo.

TRIED AND TESTED

Rayman is the alter-ego of Jimmy, a ten-year-old schoolboy who's built a virtual reality world called "Hereitscool". Rayman is the local superhero, bringing love, peace, joy and animated life to everything therein, be they rocks, insects, trees or mushrooms. Recently, an evil power has entered Jimmy's virtual world, and it's hell bent on destroying everything he's created.

It's Rayman's task to prevent this from happening, to save his friends and to bring harmony, apple pie and the American way back to Hereitscool. OK, so it's a plot that's a little, erm, *used*, working for everyone from Bananaman to Captain America but if you must have a plot, it may as well be a reasonably functional one.

And yes, it *is* another platform game, but it's a *vast* platform game. There are 10 levels in *Rayman*, each being 40 screens wide by four high. It features many levels of super-smooth parallax scrolling, with each level built up from a sixteen million colour palette. There are tons of puzzles and 50 gloriously animated enemies to come across and defeat.

Rayman himself is built up from over seven separate sprites, none of which are connected. This gives him a gloriously sloppy, comic look that reminds me of almost every famous cartoon character I can think of, without aping any of them.

If this isn't enough, Rayman has over 50 animated actions ranging from a helicopter kick that makes him fly, through to walking on his hands and sticking out his tongue if he's bored. His punch, in particular, is incredible, winding up and up until you release the button, when it flies out to astound his enemies. Pure cartoon action, sure to have all us kids (grown-up or otherwise) trying to stifle our giggles to retain that all-important hard-lad image.

AUDIENCE

Don't be fooled though: just like *Who Framed Roger Rabbit?*, *Rayman* is *not* just for the kids, and that's really the main selling point – this game is an escapist paradise from the tension of the other Jaguar titles. UBI Soft, the French company developing this title, has a real winner here, and Atari finally has a "character" that will help to define the Jaguar. And it *needs* it. Hell, it's nearly Christmas (it may *be* Christmas by the time you read this) and the Jaguar needs a big game to catch that all-important parent market.

They're up against it, in the form of *Donkey Kong Country*, surely *Rayman's* subordinate (in the graphics and sound department) yet, equally surely, the winner in the sales stakes.

This, though, is beside the point. *Rayman* looks like it will be an excellent, entertaining game, and one that will help sell consoles, the real point of this second-wave of Jaguar titles. *Rayman* will be available at the start of 1995 – I'm looking forward to it.

Finally, a quick story about the Jaguar Première. In the high dome of the Planetarium, with the press and industry bods in attendance, there were just two general laughs: one for an *AvP* advert and the other for *Rayman*. There goes our image, lads...

JAGGED EDGE

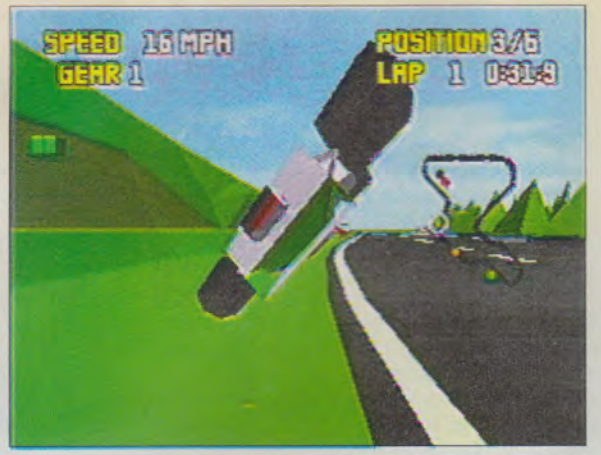
Let's face the music – and prance! Talk about blowing your own trumpet...

The look on Rayman's face leaves you in no doubt that his friend is about to make a splash landing!

Pumpkin palace – complete with a couple of tiddlers on the roof...

Boredom on Rayman's part results in a flash of the tongue!

Magic mushrooms – Rayman's colour palette is truly breathtaking.



No matter how hard you ram the car into the scenery, it just bounces straight back into shape.

The graphics remain fast and smooth on most of the tracks, but Desert Pass certainly presents a few hairy moments.

JAGGED EDGE

FIRST PAST THE POST

The Jaguar finally has its first taste of Formula-1 action! Insanely gripped by the desire to win, Nial Grimes sets about ramming other cars off the track...

GAME PLAY

It seems strangely ironic that Atari, creator of *Pole Position*, should be reduced to mimicking Sega motoring games, and yet one look at *Checkered Flag* is enough to tell you that this is *Virtua Racing* under a different name. Considering the immense amount of playability packed into the original though, that's no bad thing. So just how well does Atari's ankle-biter stack up against the Sega smash?

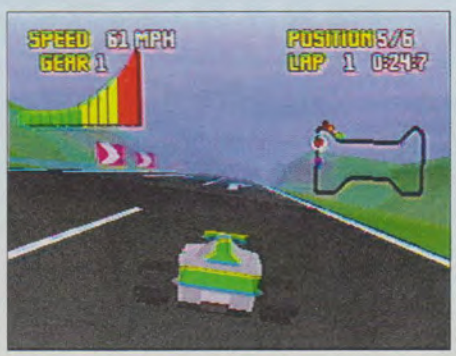
Pure arcade blood literally pulses through *Checkered Flag* – it's pedal to the metal from the moment the game begins until you come roaring home in pole position, complete with five drone cars wrapped around your bumper. There is no damage-meter to worry about, although your pride takes a severe battering as the car goes hurtling into a grass verge for the tenth time in a row. It's a real buzz to play and the tension is immense, helped no doubt by the artificial intelligence system, which only ever keeps you a few feet ahead of the pack.

WIN, WIN, WIN...

As with any racing game, the only aim is to win. Each of the ten tracks can be played individually, or you can go for a full-blown tournament – battling your way through the whole lot and facing whatever weather conditions the Jaguar sees fit to throw at you. Points are awarded in order of position, and the idea is to become world champion by the end of the season.

It's evident soon after you begin to play the game that the Jaguar power-pad wasn't really designed to control high-performance racing cars. You are given a choice between a low or high airfoil (good grip versus top speed) but either way, the car is very jumpy – the back swings out, tyres screeching at the merest suggestion of a corner, and crashing becomes a regular part of the game. A rotating track map in the corner of the screen shows the position of each car and at least gives some idea of what's to come. It can always be disabled if you think it sounds a bit too much like cheating.

The car and all of the scenery are represented through immense polygon graphics. A number of different viewpoints are available and as you watch the camera slide from side to side in a desperate attempt to keep up with the tail of the car, you can't help but be impressed. When you're



The weather conditions are very nicely done – fog limits visibility just enough to make things exciting.

As your car enters a tunnel, the camera gently bobs down to clear the roof. All other landmarks are treated in the same way – very classy!

FACTS 'N' FIGURES

Product:
Checkered Flag

Price:
£54.99

Players:
1

Graphics:
●●●●●●●●○○○

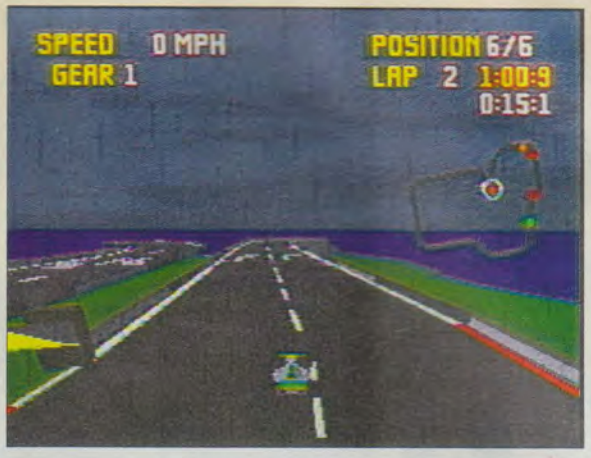
Sound:
●●●●●●●●●○○

Value For Money:
●●●●●○○○○○

Playability:
●●●●●●●●●○○

OVERALL
70%

"Yes Mr Hill, the 1995 Atari coupé features superb wet weather tyres and, er, solid bodywork."



Countries aren't named, but you can bet your life that this is the British leg!

Neat graphical touches include huge vector mountains, zeppelins and even a flying saucer!

Checkered Flag is Atari's answer to Virtua Racing, but where's the head-to-head mode guys?

running in one of the aerial modes, the camera gently bobs below each bridge and slides under tunnels effortlessly. Of course, none of these effects would be any use without a seriously kicking frame-rate and, for the most part, *Checkered Flag* delivers. On eight of the tracks, you can quite easily imagine that you're in a dusty arcade playing *Virtua Racing*.

The remaining two are slightly less impressive – everything runs well until a certain point when the frame-rate dips and suddenly your car is travelling an awful lot further between updates. It's only for a few seconds, but it is enough to send your car careering off the track almost every time. Needless to say, the other drivers come screaming past at top speed to rub salt into the wound. The scenery is nicely designed, considering the somewhat limited nature of flat-shaded polygons. Huge mountains scale above the Green Valley track, while igloos and penguins deck out the Arctic leg of the Tournament. Observation planes and zeppelins float effortlessly over each track, and Concrete Canyon has its own special surprise in the form of a flying saucer!

WET AND DRY

Atari has pulled out all the stops to make *Checkered Flag* as impressive as possible. Not only do you have half a dozen different viewpoints and crashes galore, but also neat graphical effects to back them up. Skid marks build up on the road as you race around and the weather conditions even change from track to track. Rain calls for wet tyres, and good grip is equally essential in the fog. Both feel as realistic as you can expect from any game, and the fog really does leave you wondering what's lying around the next corner. Some suitably fast-paced tunes pump along in the background and the title music is excellent, laden as it is with more heavy guitars than an *Iron Maiden* concert! The engine tone is high powered enough to make you feel that you are indeed travelling at over 150mph too, and the balance between in-game music and effects can be easily adjusted. The namby-pamby automatic gearbox can also be thrown out in favour of a good old six-speed manual.

Even the game selection screen shows a similar level of detail – a spinning three-dimensional car changes to reflect the chosen race colours and the shape of the next track can be displayed in a similar way. Slick isn't the word! While the polygon graphics do lead to a fairly limited level of detail, it does make the game much more immersive; at no point do you feel as though you are playing on "rails" and you can turn around and drive down the track the wrong way if you really want to! The various different viewpoints add to this sense of freedom and most are very usable, the turkey being the in-car angle – imagine, if you will, driving close to 200mph facing backwards with one eye shut and you'll have some idea of the control afforded by this view.

Your car can be viewed from a number of different angles, and basically the higher up you are the easier it gets.

SUMMARY

GOOD POINTS:
Pulse-racing action
Authentic weather conditions

BAD POINTS:
No two-player mode
Occasional slow-down
Too easy to win

FINAL WORD:
"A fast, but flawed, game with more than a passing resemblance to Virtua Racing. Worth a look, but play before you buy!"

VERDICT

Checkered Flag is one of the first big releases for the Jaguar and Atari really needed to pull it off; after all, what console is complete without a good racing game? In a sense, they have – it's fast, furious and almost addictive once you've mastered the sensitive control system (and the cruise control helps out a little bit). However, despite the pace of the game and the periodic jerkiness, *Checkered Flag* is quite easy to finish – in fact, you might well be World Champion by the end of the first sitting. It is the sort of game that you will sit down and play again, but it might wear thin quickly given the lack of a two-player capability.

In fact, much of *Virtua Racing*'s long-term playability can be put down to its dual mode and that places *Checkered Flag* at an immediate disadvantage. It's a real shame, because if ever there was a racer with a rip-roaring game hidden inside it, this is the one...

***ST Review* would like to extend its thanks to:**

Daniel Department
102-5 Peascod St.
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...for the kind loan of all games in *Jagged Edge*.

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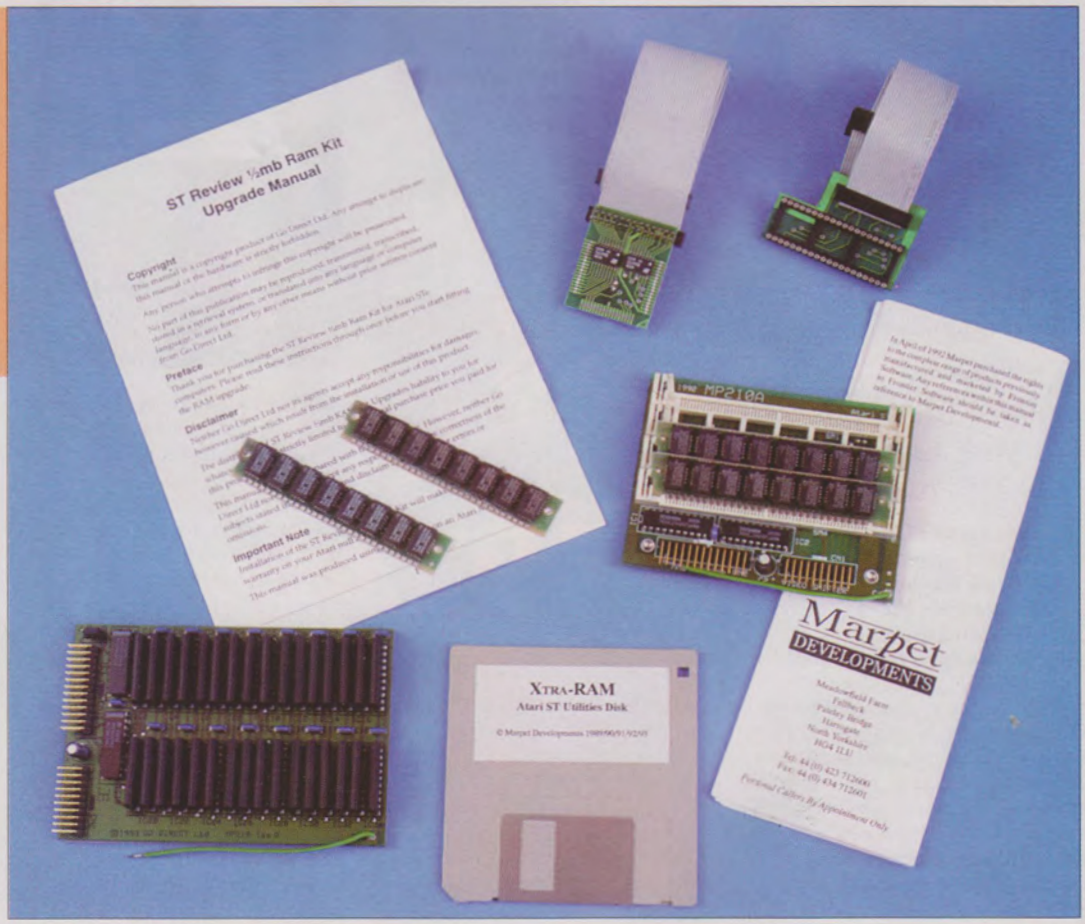

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A 520 STe is usually supplied with two 256Kb SIMMs and has sockets to plug in two more – it's that easy! A few do not have sockets, in which case you will need a pair of adaptors. These may need soldering; if this is the case, we will supply the sockets at no extra cost – that's service!

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In over 90% of all STFMs the upgrade plugs straight in. There are possible problems if either the video shifter chip or the MMU chip in your computer are not in sockets.

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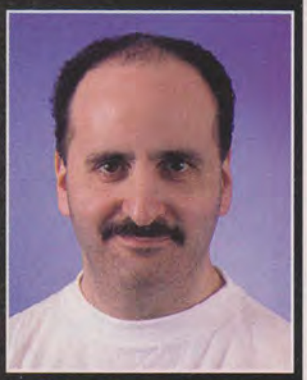

There are a couple of changes to our Offers pages this month. The first is a new trackball, the Legend, as reviewed back in issue 26. We gave it four stars – and now bring it to you at a fiver off the standard retail price.

The big inclusion is our hand scanner pack. Our survey indicated that a hand scanner was second on your "wish" list of hardware add-ons behind a hard drive – and your wish is our command!

The Naksha scanner comes on the back of a company with a big reputation. But times change and Naksha's demise has enabled us to bulk purchase the remaining stock and to bundle it with three excellent pieces of software. ***Touch Up*** *is* ***the*** *image scanning and editing software – so much so that the majority of hand scanners on the market include custom versions of it.* ***Studio Photo*** *scored 87% back in issue 20 and boasts a variety of filters and special effects while* ***Studio Convert****, its younger brother, allows you to set up your images for printing – see our review on page 34 of this issue. We've also included the two-in-one scan pad and mouse mat as featured in our Christmas round-up last issue. Its integral T-square ensures that you can scan accurately in a straight line.*

Whether you're into DTP or graphics, this pack brings all of the software and hardware elements you need to obtain professional results. This is one of the best offers we've ever put together – the individual items would cost you at least twice as much. There's only a limited quantity of this pack so do call to check that we still have stocks...

FREE DELIVERY!

TURN OVER...

...for more readers' offers and details of ordering by fax or post

SEE THE PREVIOUS PAGE FOR OUR SENSATIONAL MEMORY UPGRADE OFFERS!

MOUSE/JOYSTICK EXTENSIONS

Either a single or twin joystick adaptor will save you from the ST's most common hardware fault – a broken mouse port. Changing from mouse to joystick is that much easier if you have extension cables.

from £3.99!

MOUSE

£9.99!

The ST may be a great computer but the mouse that comes with it simply is not up to scratch. The *ST Review* mouse is a major enhancement because it uses microswitches for the buttons, making it much lighter and easier to click. Our mouse also has a much higher resolution – 280 dots per inch which means you need far less desk space and get much finer control.

CLOCK CARTRIDGE

Who sets the time each time they switch on their ST? If like many thousands of ST owners you don't, then you are missing out. Every time you save a file it gets stamped with the time and date – invaluable when you are hunting for a file. Get a clock cartridge and the time will be set automatically each time you switch on your ST.

£14.99!

ST REVIEW BINDER

ST Review is *the* essential ST magazine – and our custom binder will help you to keep your back issues in pristine condition. No more searching under the bed for last month's issue! Our green and gold beauties will accept up to 12 issues and allow you to read any issue of *ST Review* without having to remove it.

£6.49!

FREE DELIVERY!

UVK

£9.99!

VERSION 6.0 NOW RUNS AS A DESK ACCESSORY

Everyone knows about viruses, but far too many ST owners think it can't happen to them – it can! Despite the fact that you never get disks from "friends" and only buy commercial software, a virus could still infect you. And when the gremlins get at your disks, life becomes an absolute misery. Don't let this happen to you. UVK detects and kills more viruses than any other virus killer. We use it at *ST Review* – so should you!

EXISTING USERS CAN UPGRADE – CALL FOR DETAILS

LEGEND TRAKBALL

£24.95!

Back in issue 26, the Legend Trakball scored four stars out of five. Its high, 320-dpi resolution ensures smooth cursor movement from one side of the screen to the other and the four thin rubber mats on the underneath prevent it from moving on your table. The large ball is mounted on the left of the unit, close to where your thumb sits, so making the unit a joy to use. If you're into art, graphics, DTP or music then it's worth considering the Legend – and as for fast moving shoot-'em-ups...

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Just £99 including software bundle, VAT and postage

Reserve Your Scanner – Call 0480 891171 Now!

SCANTASTIC OFFER!

A hand scanner has always been one of the classic add-ons for Atari users. Naksha, the company behind our scanner offer, is sadly no more – but its reputation for reliability was one of the best. We have been fortunate enough to secure limited stocks of these excellent hand scanners and can offer them to our readers at just £99 including VAT.

Our own Andrew Wright was the first to review the scanner. He described it as "blistering good value" when it was priced at over £110 – without our software bundle! Andrew did not stop there in his praise: "a delight in action... best hand scanner for the ST... superb grey scales can be created for DTP... highly recommended", were just a few of his other comments!

We only have a limited supply of these scanners which are available on a first-come, first-served basis. If you want to order by post then please ring our sales team first to check availability. If we have stocks, you will be able to reserve your pack before sending in your order.

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Our hand scanner comes bundled with three complete software packages and an excellent scanner pad:

- *Touch Up* – industry-standard program for scanning and editing images.
- *Studio Photo* – the powerful retouching tool.
- *Studio Convert* – for converting your images into a whole range of different file formats.
- *Scanner Pad* – a two-in-one mouse mat and scan pad with a T-square for straight line accuracy.

All programs are the full versions with manuals and ring binder.

Full 12-month warranty

PD ZONE

Megatrack is the most advanced soundtracker to date – 32 channels no less!

BUDGET BUY

MEGATRACK

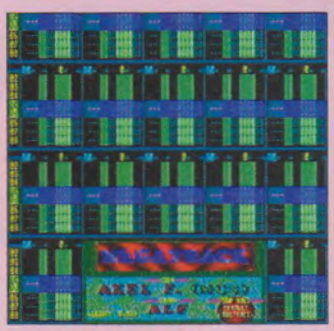
GOODMAN INTERNATIONAL • DISK NO: GF.99 • £1.95 • MEMORY: 4MB • SHAREWARE • FALCON ONLY

IN BRIEF: When the original *Soundtracker* was released some years back, the world was rightly impressed – four channels of digitised sound was a staggering achievement on an ST. But it wasn't long before this limit was broken; first came *Octalyser* with eight channels, and now we have *Megatrack* which provides an incredible 32 channels and you don't even need any additional hardware to play them back!

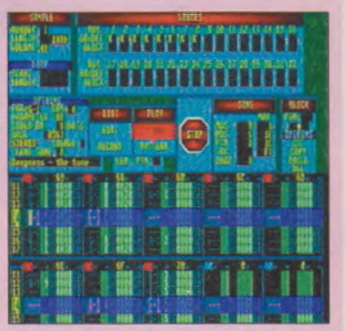
Obviously, all 32 tracks can't be displayed on the screen in one go, so the programmers have opted for a vertically scrolling interface. The channels are arranged into seven banks with the controls perched up on top and the whole lot takes up about three screens in all. If you are using a VGA monitor, the vertical resolution can be doubled to allow more of the interface to be fitted onto the screen. The innovation kind of fizzles out once you're past the "wow" factor. The controls are very similar to most other trackers on the market – the notation is completely numerical and new notes can be added via the keyboard. This has the advantage of meaning that anybody who has experience of *NoiseTracker* or one of its many clones will be at home instantly with *Megatrack*. Overall, the features aren't really up to *Audio Sculpture* standards just yet, but the sound quality is pretty neat considering the number of channels that are playing. Unsurprisingly, there aren't that many 32-track modules floating around the public domain, so Goodman International has included a couple of 8-channel demo files instead – both are perfectly capable of blowing your mind when pumped through a decent stereo system.

A very slick replay program is provided along with the tracker itself and as a desk accessory it can be used to play .MOD files while you work. The prompts for this little extra are in French but you soon get the hang of things, and more importantly, it doesn't seem to rob too much speed from foreground applications.

ST REVIEW COMMENT: "Incredible! *Megatrack* is a quantum leap ahead of its rivals and provides almost sound-studio power on a standard Falcon. The scrolling interface is a bit frustrating at times, but it's hard to see how else they could have crammed all 32 channels onto the screen! Surely the best shareware music program of all time!"



The interface spreads over three screens, but a VGA monitor cuts down on this a little.



Two eight-track tunes are included on disk to provide just a small taste of Megatrack's potential.

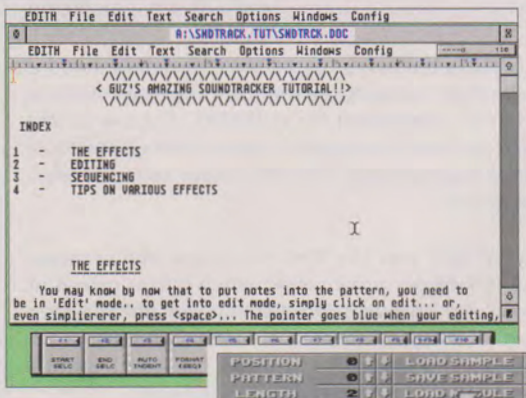
THE AMAZING SOUNDTRACKER TUTORIAL

FLOPPYSHOP • DISK NO: MUS.4531 • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

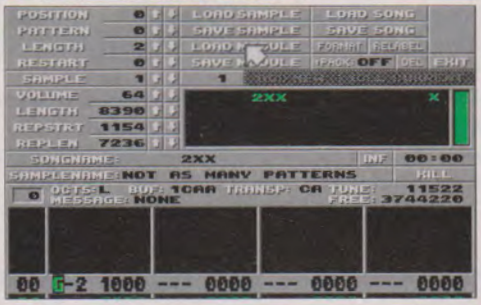
IN BRIEF: Soundtrackers may be the most popular way of producing music on the ST, but they certainly aren't the easiest. In fact, if you are used to conventional music notation, the four columns of figures presented by most trackers is enough to put you off for life. But never fear, the somewhat understated *Amazing Soundtracker Tutorial* is here to blitz those queries.

Rather than attempt to cover the whole package, the tutorial confines itself to the music notation system. Explanations of the score and effects are given in simple terms and twelve small demonstration modules are included to back them up. The file is supplied in ASCII format , so can be used with just about any word processor on the market. Grammatically, it leaves a little to be desired, but it does rolls along at a nice pace and is readable enough.

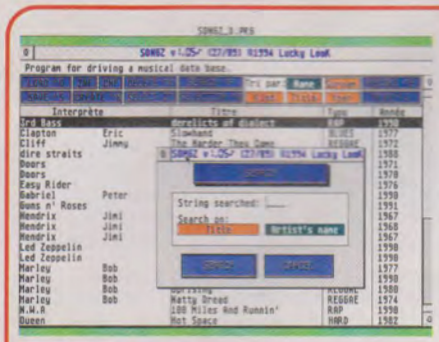
ST REVIEW COMMENT: "The word 'tutorial' is a little over the top for what is essentially a quick explanation of the tracker notation system. However, it does contain information that's quite hard to come by, so the disk is well worth a look on that basis alone."



The Amazing Soundtracker Tutorial may be brief, but it includes some very useful information.



A number of sample modules demonstrate the use of each effect – two finished tunes are also included.



Keep tabs on your record collection with SongZ – it's great, but it gobbles memory!

SONGZ

GOODMAN INTERNATIONAL • DISK NO: GF.102 • £1.95 • MEMORY: 2MB • SHAREWARE • HIGH RES. ONLY • FALCON-ENHANCED

IN BRIEF: At last – an easy way to kick a record collection into shape! *SongZ* is a database program specifically designed to store details of your all-time favourite records and CDs along with track lists and even cover artwork!

The whole program is controlled through a single GEM window, with the controls perched towards the top. Each entry can be listed according to the name of the artist, the title of the record or the year it was produced, and full search facilities are included. Falcon owners can also attach digitised sound to each entry and *SongZ* can record at a number of different sample rates. Unfortunately, the documentation is in French, but the program itself features full English prompts, right down to the nagging shareware dialogue box...

ST REVIEW COMMENT: "*SongZ* is the best custom database to appear for a long time. The interface is sleek and it's backed up by a good range of features. Beware of the memory requirements though – 2Mb is adequate; 4Mb is better, especially when it comes to dealing with larger files."
★★★★

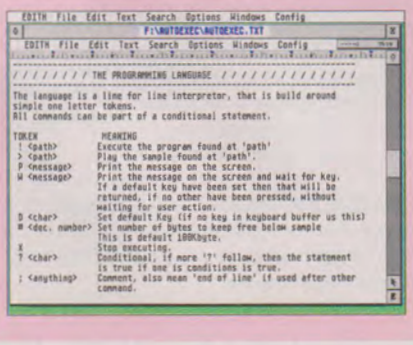
JUKEBOX

FLOPPYSHOP • DISK NO: BY NAME • £2.00 • MEMORY: 0.5MB • SHAREWARE • STE RECOMMENDED

IN BRIEF: For many years, computer users have tried to give their machines a personality, and sound effects are a key element in doing that. *Jukebox* forms just a part of the sound equation by playing a sampled sound when you switch the machine on.

Although the program started life as a straightforward sample player, the author has since bolted on some extras, not least a mini programming language. This allows conditional playing of sounds and also some basic file-management. For example, you can write a small script to select from a range of samples at boot-up. Plenty of examples of the syntax are included in the documentation and even non-programmers should be able to put their own scripts together. While the scripting part of *Jukebox* works on any ST, sample playing is limited to machines with DMA sound hardware – in other words, the STe or TT.

ST REVIEW COMMENT: "There are plenty of sample players available for the ST, but *Jukebox* does manage to introduce a few original features. It's debatable whether the programming language is practically useful, but it does work 'as described'."
★★★



The command syntax is quite simple, but finding a reason to use the Jukebox programming language might be a problem.

TOP TEN SOUND PROGRAMS

1 MEGATRACK • GOODMAN INTERNATIONAL • DISK NO: GF.99 • £1.95 • MEMORY: 4MB • SHAREWARE • FALCON ONLY

The world's first 32-channel soundtracker has arrived. *Megatrack* boasts a three screen scrolling interface and a competent range of tools, combined with the sort of sound quality you'd expect from a Falcon. An essential purchase for every digital musician.

2 OH NO! • THE ST CLUB • DISK NO: DMG.41 • £2.25 • MEMORY: 1MB • PUBLIC DOMAIN • STE/TT/FALCON ONLY

Oh No! simply plays the well-known *Lemmings* sound effect when you reset your STe or TT. It works with both keyboard and "button" resets and is totally pointless – but very entertaining nonetheless!

3 DESKTRACKER 1.3 • GOODMAN INTERNATIONAL • DISK NO: BY NAME • MEMORY: 0.5MB • SHAREWARE • FALCON-ENHANCED

The very best module player on the market now boasts even more features. The single accessory now makes the most of whatever machine you happen to be using and a number of the effects have been treated to some attention. The registration is still just a fiver.

4 SONGZ • GOODMAN INTERNATIONAL • DISK NO: GF.102 • £1.95 • MEMORY: 2MB • SHAREWARE • HIGH RES. ONLY • FALCON-ENHANCED

Cataloguing your record collection will be a pleasure with *SongZ*. This superb custom database is specifically designed to handle tracks, cover artwork, and you can even record snatches of sampled sound on the Falcon. Watch out for the memory requirements though.

5 MOZART'S DICE WALTZ • GOODMAN INTERNATIONAL • DISK NO: GD.1936 • £1.95 • MEMORY: 0.5MB • HIGH RES. ONLY

Clever bloke, that Mozart – not only did he devise a life story to perplex O-level music students (bitter, moi?) but also a system of music based on dice. This program recreates the idea on the ST and the result can be played via a MIDI device or the internal sound chip.

6 STAR REPLAY • NEW AGE PDL • DISK NO: FALC.7 • £1.75 • MEMORY: 1MB • PUBLIC DOMAIN • FALCON ONLY

Yet another module player for the Falcon hits the market. It's a drag and drop affair and the sound quality is admittedly rather nice. However, *DeskTracker* with its background playing facilities and GEM interface is by far the best bet.

7 THE AMAZING SOUNDTRACKER TUTORIAL • FLOPPYSHOP • DISK NO: MUS.4531 • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

Brush up on your knowledge of tracker effects with this informative tutorial. The text file isn't exactly extensive, but a number of demonstration modules are included on the disk and it certainly teaches you a good deal more than most manuals.

8 THE FINAL SCORE • FLOPPYSHOP • DISK NO: MUS.4531 • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN • HIGH RES. ONLY

Digital score-writing on a shoestring is now possible thanks to *The Final Score*. The output it produces is perfectly adequate on a dot matrix printer and five font styles can be used alongside the range of standard musical symbols. The *STOS* interface is somewhat disappointing however.

9 JU-MIX • CALEDONIA PDL • DISK NO: MU-86 • £2.50 • MEMORY: 0.5MB • FREEWARE • HIGH RES. ONLY

A fairly straightforward sequencer that allows you to produce the dodgy sampled sound demos that fill the public domain. The documentation is nice and clear, and a demo tune is included on disk for you to play with.

10 JUKEBOX • FLOPPYSHOP • DISK NO: BY NAME • £2.00 • MEMORY: 0.5MB • SHAREWARE • STE RECOMMENDED

A start-up sample player that has somehow managed to sprout a basic programming language. While this can be can be useful for renaming files, you do end up putting a lot of work into something that is ultimately less powerful than *Superboot*.

PD ZONE

CLA 2

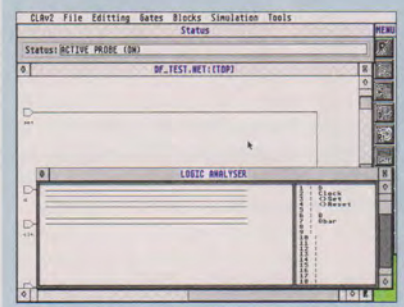
GOODMAN INTERNATIONAL • DISK NO: GF.96 • £1.95 • MEMORY: 2MB • SHAREWARE • HIGH DENSITY DISK DRIVE • HIGH RES. ONLY

IN BRIEF: Fancy yourself as an electronics buff? *CLA* (Circuit Logic Analyser) is a program that allows you to both design and test circuits without ever having to reach for a soldering iron. The program is wholly mouse controlled and the design and testing procedure is seamlessly integrated. New gates can be added to the circuit by simply clicking in the window, and linking components together is equally straightforward.

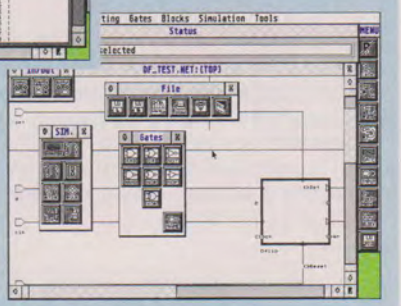
As for the simulation side of things, you are offered simple bulbs and a far more powerful logic analyser, both of which can be slotted into a design in seconds. Output is via *GDOS*, and *NVDI* is both supported and recommended. If you can get over the problem of a high density disk, *CLA* does run on a standard 2Mb ST; a fast machine is recommended however.

ST REVIEW COMMENT: "*CLA* is a well-programmed piece of software that performs admirably on a nippy machine. The documentation does assume you know what you are talking about, but that's not totally out of order considering the high-end nature of the program."

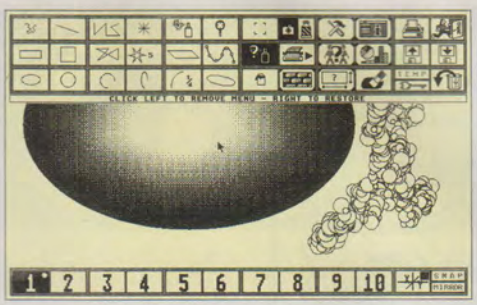
★★★★



Circuit testing on the desktop is now a reality thanks to CLA – and no, don't ask me how it all works!



The stylish GEM interface and floating tool palettes give CLA a very stylish appearance.



Gradient fills and wacky tools are all part and parcel of Munch – the most exciting mono art package you ever did see!

MUNCH

GOODMAN INTERNATIONAL • DISK NO: GD.2378 • £1.95 • MEMORY: 1MB • SHAREWARE • HIGH RES. ONLY

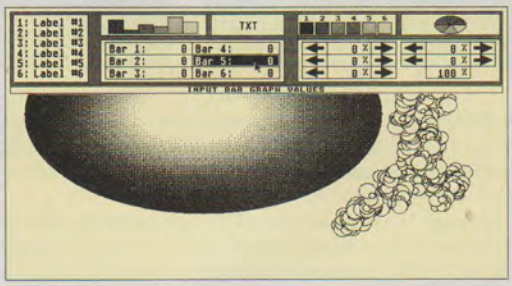
BUDGET BUY

IN BRIEF: There's no shortage of quality colour art packages on the ST, but when it comes to using a mono monitor, suddenly the situation changes – all of the artistic tools vanish and are immediately replaced with practical, DTP-oriented alternatives. How boring!

Munch is almost unique in its approach to mono art. Beyond the usual circles, ellipses and curves, it offers a wide range of fun tools and effects. You can draw with bubbles, outline objects, bend the whole screen and even create gradient fills. This makes the whole program feel very similar to *Prism Paint 2* in style. And not only is the program powerful, it's also very thoughtful – the co-ordinates pop-up in the corner on the screen as each object is drawn, and even the interface is kind enough to do a disappearing act as soon as you get down to business on the work-screen.

ST REVIEW COMMENT: "A mono art package has to be really good to make an impression these days, and *Munch* slips into that category comfortably. The ability to deal with extra-large pictures and neat touches such as the gradient fills put it in a class of its own."

★★★★★

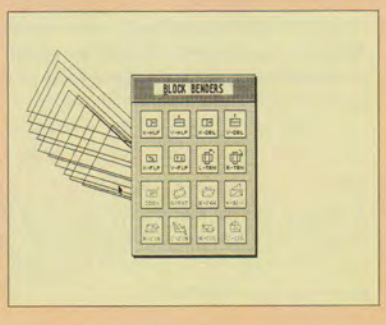


The graphing module allows pie-charts and histograms to be constructed with ease.

DRAW 2

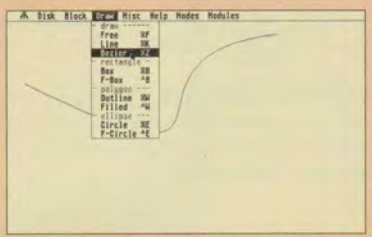
FLOPPYSHOP • DISK NO: BY NAME • £2.00 • MEMORY: 1MB • POSTCARDWARE • HIGH RES. ONLY • FALCON-COMPATIBLE

IN BRIEF: *Draw 2* is a standard issue public domain art program. It boasts a range of features not unlike those offered by the original *Degas* and runs on any ST with a high res. monitor. Smear effects and block handling facilities are about as exciting as



The block operations are all quick, but Draw 2 isn't as stylish as Munch.

things get. Up to three pictures can be held in memory at any one time and the usual range of mono graphics formats are dealt with. The work area is not held in a window so you're limited to screen-size drawings. Having said that, a virtual screen driver (such as *MonSTEr*) can be used to provide a bit more breathing space. One advantage of this anti-GEM approach is the speed of the screen updates – all operations are respectably fast on an ST, and almost instant on a Falcon.



The range of basic tools is reasonable, but Draw 2 doesn't offer anything startlingly original.

ST REVIEW COMMENT: "*Draw 2* is lethally fast, but unfortunately the speed hides a rather serious lack of features. Most of the basics are there, but with *Munch* on the market, there's precious little reason for using *Draw 2*, competent as it may be."

★★

New Age PDL

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All disks require a COLOUR system unless: 'H' - High resolution monitor required, 'A' - Any setup suitable.

FALCON 030 – WE STOCK A LARGE RANGE OF FALCON SPECIFIC SOFTWARE ALL ON HIGH DENSITY DISKS. OUR FALCON CATALOGUE IS FILLED WITH FREE PROGRAMS AND COSTS JUST 50P. ALL FALCON DISKS £1.75

GAMES

GAME 168 - Napolean - a 'Risk'style game of war and strategy. 'H'.
GAME 185 - Oxyd 2 - the sequel to the brilliant Oxyd, much harder than the original. 'H'.
GAME 186 - Tetric - new Tetris type game. 'H'.
GAME 214 - Shocker 2 - Excellent ball/puzzle/strategy game similar to Oxyd. 1 Meg + 'H'
GAME 215 - Nobi Racing - Control your snake to collect all the objects on the screen. 'H'
GAME 11 - A Question of Snooker, Pinball, Devestator, Roll n Nudge, Ranger.
GAME 78 - Popeyed - a pop music game with an adult theme.
GAME 83 - Grandad & the Holey Vest - superb animated adventure. 1 Meg+.
GAME 104 - Blat! - A very nice version of Tetris. STE ONLY.
GAME 117 - Fast Freddy - lovely platform game with superb graphics.
GAME 131 - Glass Buttock of Tharg - save the land from the evil buttock! - 1 Meg+.
GAME 132 - Psycho Pig - two disk platform game, very cute.
GAME 139 - Grandad II - the sequel to Game 83, comes on 2 disks 1 Meg+.
GAME 148 - Operation Blue Sunrise 3 - massive STAC adventure game. 1 Meg+.
GAME 150 - Course Angler 1.02 - go tackle fishing on your ST!
GAME 151 - Sim Pig! - a brilliant pig farm simulation! Like Sim City & Sim Earth.
GAME 157 - B17 - bomb the buildings, F-16 - very good flight game, 8 missions.
GAME 179 - Asteroid, Bang 3, Battle, Bellum, Quiz, Blaster, Chunks, Europe, Explode, Fuzzball, Gems, Invaders, Megaroids, Micro, Octopod, Othello, Pac Man, Plant, Rockfall, Tanx, Tennis, Wall Street, Zappy.

MEGA-GAMES PACK ONE!

No less than ten disks crammed to the brim with archived games (de-archiver and printed instructions supplied) to squeeze on an amazing 117 games covering board/puzzle/strategy/arcade and adventure. For a full list ask with your order or if not ordering, send a stamp. All should run on a colour system with 512k and be STE compatible! You will need about twenty disks to unarchive these disks onto! AMAZING VALUE FOR MONEY.

117 GAMES – JUST £15!

GAME 180 - Mystic Well, Deep Lair, Football, Harris Goes Skiing, Haunted House, Invaders, Jumpster, Roam, Stoneage Deluxe, USA, Zyxm, Firestorm.
GAME 181 - Utopos 1.5 - very slick STE only Oids/Grav type game, Endurance - 3D game.
GAME 183 - Towers - a great new Dungeon Master Clone - the best yet! 2 disks (1Mb+).
GAME 187 - Karate Champion, Hector and the Mutant Vampire Tomatoes - nice platform.
GAME 188 - Premier Mahjong II - excellent version of this superb tile game. 60Hz only.
GAME 189 - Cud Lee's Quest - platform game for kids, Mindmelt - roleplaying fantasy game.
GAME 190 - Quest for Knowledge - quiz type game set in a maze arena.
GAME 191 - Walls of Illusion - yet another Dungeon Master Clone, good one though. 1 Meg+.
GAME 193 - World Fighting Championships - beat up opponents from all over the world.
GAME 198 - Roll-It - ingenious puzzle game with 40 levels, a sort of ball/tile game. 1 meg+.
GAME 199 - Skulls - A flash STE only version of Minesweeper from the PC, good. 1 meg+.
GAME 201 - It's A Mug's Game - good overhead view boxing game with nice graphics etc.
GAME 204 - Gone to the Dogs - bet on the races! Grav - good arcade game based on Oids.

WE NOW STOCK STARBALL! (GAME 222)
THIS IS THE LATEST BLOCKBUSTER GAME THAT EVERYONE HAS BEEN RAVING ON ABOUT - HAS TO BE ONE OF THE BEST GAMES OF THE YEAR!

GAME 209 - Money Mania - collect all the money from each screen, loads of nasties etc. Good.
GAME 210 - Ruthless, shoot em up, Spherical - good platform game, Serendipity - good puzzler.
GAME 211 - War of the Worlds 3 - 3D game 1 Meg+, Pac Attack - very good new Pacman clone.
GAME 212 - Combat - shoot 'em up similar to Operation Wolf. Space Wars 2000 - dogfight.
GAME 213 - Darts 180 - mouse controlled Pub darts game. Stone radier - boulderdash clone.
GAME 216 - Rumbo - new split-screen platform game, quite easy - suitable for kids.
GAME 217 - Ultiquiz - a complete quiz construction set to make your own team quizzes.
GAME 218 - Starburst - simple shoot 'em up, Max - nice arcade/adventure game.
GAME 219 - Startrek - a complex looking battle simulation where you must fend off an invasion.
GAME 220 - Dunces Cap Compilation - Outrageous Fortune, The Wiz, Match Maker & Mindlock.
GAME 221 - Frame of Mind - new DCS game based around gambling - very addictive.
GAME 222 - Starball - absolutely brilliant pinball game with 4 sub-games! Excellent!
GAME 224 - Winglord demo (like Joust), Snacman, Sqish, Well 'Ard - arcade/adventure.

DEMOS

DEMO 355 - The Brace Demo - nice auto-running multi-part from Diamond Design.
DEMO 351 - The Edge of Panic Demo - a good STE only demo by ACCS.
DEMO 350 - Exhaust demo - another good STE only demo by ACCS, 1 meg EXACTLY!
DEMO 342 - Sid James Demo - clips from the films - STE only 1 meg+, 2 disks.
DEMO 335 - Reality is a Lie - a 13 screen demo by Psychomix, very good. 1 meg+.
DEMO 333 - Cemetary demo - a good digi-music demo.
DEMO 330 - Beginning of the Ending - this demo actually plays in the background of a game of breakout which is played with 5 balls! Hows your concentration.

ART & GRAPHICS

ART 1 - A disk full of 23 miscellaneous utilities including viewgif 1.2.
ART 51 - Crackart 1.36 - latest version of the best ST art package! 1 Meg+.
ART 128 - Gemview - new version of this superb viewer/converter.
ART 157 - PAD 2.4 - English version of this high res drawing package. 1 Meg+.
ART 187-196 - Temptation! Volume 1 - the first pack in a whole new range of top quality pictures of tempting girls! Two versions (please state which) - one for STFM and one for STE which takes advantage of a 32,768 colour pallete! EXCLUSIVE to New Age PDL! Ten crammed disks.
ART 209 - Erotic Dreams slideshow 1 - all pictures of Supermodel Cindy Crawford.
ART 212/213 - POV Raytracer, the best raytracer around! 2 disks.
ART 223 - Easy Art - A nice art package with many useful features.
ART 225 - Moskavites Girls 1 PCS Slide Show - loads of gorgeous women in full colour.

SOUNDTRACKER MUSIC

TRAC 129 - Four, Progfunk, Cult 2, Cult 3, Federal Force, Rave 1.
TRAC 128 - Con, Short, House, Jewel, Spassong, Celtic 6, Rappit, A-Team, Sweet Dreams.
TRAC 127 - More Lemmings, Backpopped, Psychic 1, Bushfire, Donna 2, Ace Base, Echoing.
TRAC 126 - Scrambled Mind, 1+ World, Wyre It, Hope Part 2, Lotus Turbo 2, H-Metal.

WORDPROCESSING & DTP

WORD 1 - ST Writer Elite, EDI Text, Zap ST, ST Page, Typist, Desk Accessories. 'A'.
WORD 4 - First Word + tools, Grammar checker demo, Spell Binder, Text Filter. 'A'.
WORD 5 - Calamus Demo, no save function but you can print. 'H'.
WORD 9 - Calamus Support disk - loads of utilities for Calamus and fonts etc.'H'.
WORD 12 - Papyrus Office Demo 2.26 - good document processor with fonts etc. 'H'.
WORD 13 - Calamus S demo - fully functioning except save. 2 disks. 'H' 1 Meg+.
WORD 15 - DB Writer 1.8 - very slick wordprocessor with spellchecker. Many Features. (A).
WORD 16 - Marcel 2.2 - Nice new wordprocessor with spellchecker and many functions. (A).

BUSINESS

BUSI 2 - Sheet 2.0, Dbase One, First Base 1.6, Home Budget Template. 'A'.
BUSI 4 - Opus 2.2 - brilliant spreadsheet. 1 Meg+. 'A'.
BUSI 6 - Double Sentry Book Keeping System, Address Book. 'A'.
BUSI 11 - Compact Office Management Program 2.05 - for businesses, tons of features. 'A'.
BUSI 12 - Inventory PRO - keep track of stock levels, GP Patient Care for GPs. 'H'.
BUSI 14 - Data Techniques 1.41 - easy to use but powerful new shareware database system. 'A'.

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UTILITIES & APPLICATIONS

UTIL 2 - Startgem, Head Start 1.1, DC Clock, Disk Checker, Hard Disk Utils, Ram Disks, Hack 'n' Copy, Turtle 3.2 (HD backup), Megaformat, Memory Test. 'A'.
UTIL 4 - Pools 2.5, ST init 3.4, Switcher - loads programs faster, 20 DC utilities. 'A'.
UTIL 5 - F-Copy 3, DC Showit, Desk Manager, Disk Scan, Mono Emulator 5, Spool, DC Stuffer (loads 32 accs), Speech Synthesiser, Mouse Accelerator. 'A'.
UTIL 6 - James The Butler, London Phone Codes, MenuSYS, Pinhead, Super Calendar Batch Startup, Auto Sort, Postmortem, No Bombs, E-Disk, 9 Quick Utilities. 'A'.
UTIL 13 - German to English translator, fast Print, DC Salvage, MiNT, Maccel 3.0. 'A'.
UTIL 14 - Printer Drivers inc Canon Bubblejet, Qume Daisywheel, Brother + Epson. 'A'.
UTIL 16 - Chameleon - loads and unloads accessories without having to reboot, Sticker 3.0 ('H'), Definitive File Selector, Super Virus Killer, Benchmark. 'A'.
UTIL 19 - Your Second Manual, Jokes, GDOS info, Bombs info + several magazines. 'A'.
UTIL 30 - Superboot 8.1, Build Your Own Scanner, Report Writer, Disk Cleaner. 'A'.
UTIL 35 - Cheetah 1.1 (high speed copying util), Rainbow TOS patches, Unarj 2.2. 'A'.
UTIL 38 - Printer Drivers inc: KXP 1124, Star LC24, NEC Pinwriter, Brother, Canon, Citizen, HP Deskjet, Oki, Qume, Taxan, Toshiba, Riteman, Atari. 'A'.
UTIL 40 - Loads of packers inc: Atomik 3.5, Automation 5, Dragon 3, Fire 2, Ice 2.4, Pompey 1.9, Speed Packer 2, Branch Always Packer. + Multi Depacker 1.5. 'A'.
UTIL 42 - Intro Maker - mix pictures, sprites, scrolls and music together. Colour only.
UTIL 45 - Kaos Desk 2.01, Terra Desktop 1.36 - replacement desktops. 'A'.
UTIL 46 - STOS Shoot em up builder kit 0.6 - colour only.
UTIL 53 - TOS Version 1.0 - allows you to run programs that don't run on your TOS. 'A'.
UTIL 54 - Message Scroller, Archiver Shells, Envelope Printer Demo, Mega Cracker. 'A'.
UTIL 57 - Revenge Doc Displayer 3.0, Wordfinder 3.0, Desktop.inf configurator. 'A'.
UTIL 58 - Career Themes Inventory and Personality Tester - great fun!
UTIL 59 - Neodesk patches - upgrades 3.01 to 3.02 and 3.02 to 3.03. 'A'.
UTIL 60 - JC Label 1.3, Jon-Dos 1.7, Flowchart Compiler, Boot Time 2.0, Multisync. 'A'.
UTIL 62 - BJ Chrome 1.1, Desk Master, Grocery Lister, Silk Mouse, Auto Load, Blitz. 'A'.
UTIL 66 - Nation X utility disk - over 150 programs! Everything you need to get you started! Includes disk utils, diary, virus killer, packers etc. - highly recommended! 'A'.
UTIL 67 - Label CAD 2.2 - design cards, posters etc. Document files on UTIL 68. 'H'.
UTIL 70 - Route Finder 1.8 - Like Autoroute - plans journeys for you, SpiritED 1.3, Die UHR. 'A'.
UTIL 74 - Award maker - easy to use program to create certificates with nice fonts, borders.
UTIL 75 - Idealist 3.4 - file printer that saves up to 80% of paper used! 2 disks. 'A'.
UTIL 77 - Before Dawn 1.25 - latest and biggest version of this screen saver. 2 disks.
UTIL 79 - Spectrum Games - a disk full of games to go with the emulator on Util 55. 'A'.
UTIL 80 - Terradisk 1.38 (latest), X-Jet 097, Curtains - protect your ST from snoopers. 'A'.
UTIL 82 - Beropress 2.6 - create posters, banners, gift cards, letters etc. 'H'.
UTIL 83 - Spectrum Emulator 2.07 - latest version - 2 disks + example progs. 1 meg+.
UTIL 94 - OMEN 2.46 - A new Open Multi-tasking Environment for all STs. 'A'.
UTIL 97 - German To English 3.0 - latest version of this file translator, includes computing.

MUSIC & MIDI

MUSIC 11 - Arpeggiator, Zeppelin, MIDI Beat, Project, Jukebox, MKS-50. 'A'.
MUSIC 12 - Henry Cash Sequencer, Composer. 'A'.
MUSIC 16 - Yamaha PSS790 Editor, includes loads of sample voices.
MUSIC 22 - Alchemie Junior 2.2 - sequencer with real-time, multitasking etc. 'H'.
MUSIC 23 - Sound Merlin - good ex-commercial program, Mozart's Dice Waltz - compose music without musical knowledge. 'H'.
MUSIC 24 - Octalyser 8-track tracker - STE only, Protracker 2.1, YM Tracker.
MUSIC 26 - PSS Utilities disk, loads of programs including patch editor, librarian etc. 'A'.
MUSIC 27 - Casio CZ sounds, 32-track sequencer, Kawai K1 editor, MIDI menu. 'A'.
MUSIC 29 - Kawai K1 synth sounds. 'A'.
MUSIC 35 - Roland 'D' Series Sound Banks for D5, D10, D20, D110 and GR synths. 'A'.
MUSIC 36 - Final Score 2.0 - score writing system. 'H', EKSEQ 1 - 100 track sequencer. 'A'.
MUSIC 38 - 790 Dump, ST Sound 2 - record, play, compress and edit samples.
MUSIC 39 - SSP PD Voicepack - patches for the Roland GM-70, TX81z, Roland D110.
MUSIC 45 - Noisetracker 2 - The latest version of our most popular tracker program.
MUSIC 47 - Quartet files in 4v format, MIDI Master Drummer, sample replay. 'A'.
MUSIC 49 - Rowland D10, D20 editor, K1-K4 converter, Busker demo. 'H'.
MUSIC 53 - Octalyser 0.9 - new version of this great 8-tracker program. STE only.

EDUCATION

EDUC 1 - Kid Music, Kid Notes, Kid Piano, Kid Puzzle, Kid Graph, Rebus Writer.
EDUC 21 - G.C.S.E. Higher Maths Grade Tutor, Franglais 3 - French Tutor.
EDUC 22 - G.C.S.E. Chemistry Tutor - all you need to attain grade 'C' or above.
EDUC 23-26 - CIA World Factbook - four disks crammed with information on hundreds of countries + weights & measures and a complete chemistry reference book!
EDUC 39 - Mini Magic Storybook - cut down version of the successful commercial packages.
EDUC 43 - Professor Clever 2 - teaches kids aged 5-11 about numbers, spelling and time.
EDUC 46 - Scool not School - learn drawing, spelling, sums, typing and more for kids.
EDUC 49 - Big Top Type - Encourages kids aged 2-6 to start using the computer. 1 Meg+

PROGRAMMING

LANG 1/2 - Sozobon C Compiler release 2. Includes documentation, shell etc.
LANG 5-9 - GNU C++ Kit - Hard Drive + 2.5meg required, not for novices! 5 disks.
LANG 13 - Professional GEM guide - 17 chapters of tutorial with C source.
LANG 16 - STOS Tutorial and various Basic programs.
LANG 27 - GFA Basic v 2.0 - GFA Expert - a nice GFA Basic tutorial.
LANG 29 - STOS Tracker - adds a new set of STOS commands for Soundtracker.
LANG 36 - STOS Extensions: Missing Link, Misty, Blitter, MIDI, STE, + 7 more!
LANG 37 - STOS Software pack 1 - millions (almost!) of routines etc.
LANG 41/42 - STOS 3D - brilliant extension allowing you to program in 3D. 2 disks.
LANG 43 - A disk crammed to the brim with STOS ACBs.
LANG 44 - STOS Adventure Creator 1.03 - write your own graphic adventures. 'C'.
LANG 45 - Heat 'n' Serve Sozobon C - a very easy to install version of this compiler. 'A'.
LANG 53 - STOS Extra Extension 2.01 - adds about 52 new commands to STOS. 'A'.
STOS 17 - The latest issue of STOSSER disk magazine, tutorials, articles, reviews etc.
BUPRO 2 - 68000 Programmers Library - hundreds of routs for games.
BUPRO 4 - Moving Bytes 1 - more routines for screen effects, music, scrolls.
BUPRO 16 - ST-68K Reference 3 - includes full data on ST internals, excellent.

ACCESSORIES & COMMERCIAL
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Easy Text Professional DTP (1 Meg+)	£35.95
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IMPrint, for quality mono printouts on 9 or 24 pin printers	£9.95
IMPrint, same as above but for colour printers	£13.95
Calamus 1.09 - mono 1 meg+	£57.95
Calamus SL - Hard Drive plus 2 meg required	£188.95
Outline Art V3.0 - Mono 2 meg required	£188.95
Mr. Smart's BIG Time - 25 commercial educational programs	£24.95
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PD ZONE

TCACHE 6

FLOPPYSHOP • DISK NO: UTL.3834 • £2.00 • MEMORY: 0.5MB • CHARITYWARE • FALCON-COMPATIBLE

IN BRIEF: As fast as modern hard disks are, they're still no match for RAM. It makes sense to let your ST keep frequently-accessed parts of the disk in memory – enter *T-Cache*...

One of the main attractions of this program in particular is its ease of use; just spoon the lot onto your hard disk and forget about it. Changes can be made to the configuration instantly through an accessory and you can also keep a check on the success rate of the caching software from this point. The prompts are in German, but the on-disk manual explains every option clearly. Both read and write caching are supported and the floppy light can be used to monitor hard disk access which is rather cute.

T-Cache also scores big points in terms of compatibility – it runs without problems on the ST, TT and Falcon. In order to register the program, just give a donation to an animal charity.

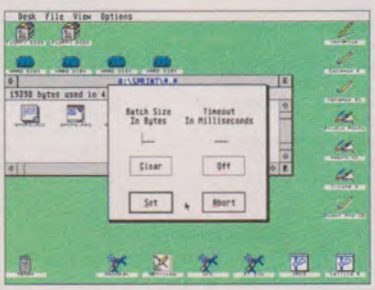
ST REVIEW COMMENT: "*T-Cache* isn't markedly better than its peers in terms of power, but the easy-to-use accessory gives it a lot of appeal. A few English prompts and we would be laughing."

The documentation explains all features clearly, but you will need to persevere with the German prompts.

SPRINT

FLOPPYSHOP • DISK NO: UTL.4539 • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: Slow printers are the curse of the home computer user. No matter how fast your machine is, if the printer can't keep up you are left helplessly finger-tapping. *Sprint* is one of many public domain printer spoolers that can alleviate this problem. It takes data quickly from your applications, keeps it in memory and squirts it to the printer in the background.



The spooler parameters are adjustable through a desk accessory – ideal for balancing speed with memory efficiency.

The exact amount of memory gobbled up by the utility is fully adjustable, as is the speed at which data is pumped to the printer. Not only can *Sprint* relieve your applications of data quickly, it can also speed up the output itself! This seemingly impossible feat is achieved by bypassing the operating system bottleneck at the printer port.

ST REVIEW COMMENT: "If you can spare the memory, *Sprint* is well worth installing. It allows you to continue working while your printer chugs away in the background, and can even speed up output when it comes to printing graphics. It's not quite as clever as *GEM-Spool*, but it does the job well."

Any serial port can be used at up to 19,200 bps on the ST and over 115,000 bps on the Falcon and TT!

GHOSTLINK

FLOPPYSHOP • DISK NO: BY NAME • £2.00 • MEMORY: 0.5MB • FREEWARE • FALCON-COMPATIBLE

IN BRIEF: Most modern PCs come with a CD-ROM these days, and many of the files found on cover-mounted disks are usable on the ST – sound samples and images for example. *Ghostlink* allows your ST to tap into a PC and share its resources: the CD-ROM, the hard disk and virtually any other storage device you might have attached.

The program actually installs a fake drive on the ST, so you don't even have to fiddle about copying files – the contents of the PC drives are immediately available from within virtually any application. The software can be configured in a number of ways, but the "All drives" option is useful in that it only takes up one drive letter on the ST – all of the devices on the slave machine appear as a folder. As for the PC side of things, you just need to run the supplied program and suddenly it finds itself at the beck and call of the Atari. About the only file operation you can't perform via the ST is folder renaming; a feat that DOS still has trouble performing. All of the program parameters can be adjusted through a nice GEM-driven utility and you can be up and running within seconds of breaking the seal, as they say.

The transfer speeds depend entirely on your machine's serial port – a standard ST can muster up 19,200 bits per second, while the Falcon and TT can stretch to just over 115,000. Neither of these figures are as fast as they sound when dealing with large graphics or sound files, but it's certainly quicker than going via floppies. A parallel port version is said to be in the pipeline and this should boost the rate up considerably. The more serial ports you have, the more machines can be slaved, right up to three on the TT! Of course, the only thing you will need (other than the software itself) is a suitable null-modem cable, which should be available from most computer shops.

ST REVIEW COMMENT: "If you use a PC and an ST, *Ghostlink* is worth its weight in null modem cables. Although this is ostensibly a beta release, it seems to work very reliably indeed and we can look forward to a version that allows another ST to act as a slave in the not too distant future."

Information on the directories being accessed is displayed in real-time on the PC's screen.

All of the remote drives can be accessed as folders in a single ST drive.

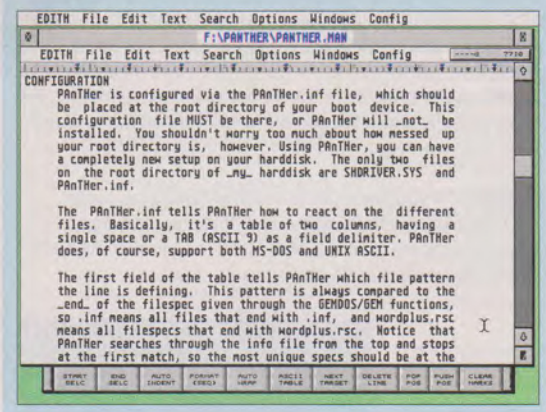
PANTHER

FLOPPYSHOP • DISK NO: BY NAME • £2.00 • MEMORY: 0.5MB • MONEYWARE • FALCON-COMPATIBLE

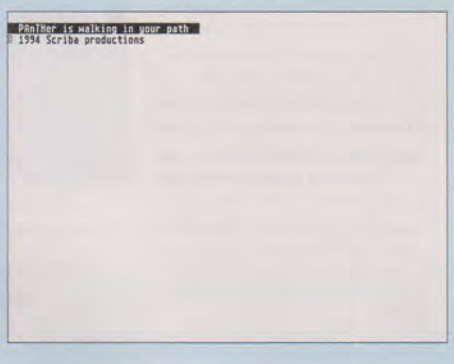
IN BRIEF: Use an ST with a hard disk for any length of time and the root directory of drive C is likely to end up in a right mess, with desk accessories, "inf" files and all sorts of other bits and bobs all vying for space. *Panther* allows you to split the lot up neatly into separate directories.

Unlike many utilities of this type, it doesn't actually force you to put your files anywhere in particular. Redirection links can be defined through a separate information file, so you could, for example, have your accessories loaded from a folder called *ACCS* on drive C, drive H or anywhere else! And the fun doesn't end there – by setting up some save links, file-path worries are a thing of the past. Simply pop the appropriate line in the *PANTHER.INF* file and all files ending with a specific extension will be plonked in the right directory!

ST REVIEW COMMENT: "*Panther* is the most flexible redirection program on the market. The interface (if you can call it that) is a little rough at the edges, but it's well worth persevering – your hard disk will certainly thank you for the effort!"



The structure of the info file is thoroughly explained.



Put your accessories, "inf" and "sys" files where you want them with the help of Panther – file redirection on a stick...

CONTACTS

The PD and shareware programs this month were supplied by:

- ***Caledonia PDL*, 250 Oldtown Road, Hilton, Inverness IV2 4PT. (Tel: 0463 225736)**
- ***Floppyshop ST*, P.O. Box 273, Aberdeen AB9 8SJ. (Tel: 0224 312756)**
- ***Goodman International*, 16 Conrad Close, Meir Hay Estate, Longton, Stoke-on-Trent, Staffs ST3 1SW. (Tel: 0782 335650)**
- ***LAPD*, P.O. Box 2, Heanor, Derbyshire DE75 7YP. (Tel: 0773 761944)**
- ***Merlin PD*, P.O. Box 77, Stroud, Glos. GL6 9YD**
- ***The ST Club*, 7 Musters Road, West Bridgford, Nottingham NG2 7PP. (Tel: 0602 455250)**

TOP TEN UTILITIES

1 GHOSTLINK • FLOPPYSHOP • DISK NO: BY NAME • £2.00 • MEMORY: 0.5MB • FREEWARE • FALCON-COMPATIBLE

Accessing PC peripherals from an ST is a piece of cake with *Ghostlink*. Simply plug a null modem cable into both machines, run the software and anything from CD-ROMs to floppy disks can be used from the ST desktop. It's not fast, but it seems to be very reliable.

2 OUTBURST • FLOPPYSHOP • DISK NO: UTL.4536 • £2.00 • MEMORY: 1MB • SHAREWARE

Sick and tired of *PageStream*'s slow print routines? In that case, install *Outburst* and watch it fly! The package comprises a replacement printer driver with a parallel port booster and the results are spectacular. It requires *PageStream 2* and a DeskJet/LaserJet printer to do the business.

3 FALCONFREE • MERLIN PDL • DISK NO: ESE.066 • £1.25 • MEMORY: 1MB • FREEWARE • FALCON ONLY

By fiddling with the NVRAM settings it's possible to get the Falcon to boot into any screen mode, but you do have to be careful not to select ST high resolution. If the worst comes to the worst, a *FalconFree* bootsector will get you out of trouble.

4 PANTHER •FLOPPYSHOP • DISK NO: BY NAME • £2.00 • MEMORY: 0.5MB • MONEYWARE • FALCON-COMPATIBLE

Reorganise your hard disk the easy way with *Panther*. By fine-tuning the configuration file you can load your accessories from a folder and also redirect file-saving from any application. It's not the easiest program on earth to use, but the rewards are worth the effort.

5 DISKFREE • MERLIN PDL • DISK NO: ESE.088 • £1.25 • MEMORY: 0.5MB • FREEWARE • FALCON-COMPATIBLE

DiskFree is a handy disk-space monitor. It presents the level of usage for each drive in a nice, easy-to-read fashion and can also save the information for comparative purposes. Not quite as nice as the CPX alternative, but still a rather good utility.

6 TCACHE 6 • FLOPPYSHOP • DISK NO: UTL.3834 • £2.00 • MEMORY: 0.5MB • CHARITYWARE • FALCON-COMPATIBLE

A cache is the best way to boost hard disk performance and this is a fine example from Germany. It seems to be compatible with all machines and configuration is handled through a neat little accessory. Pity about the lack of English prompts though.

7 UNARJ SHELL 0.4 • FLOPPYSHOP • DISK NO: UTL.4372 • £2.00 • MEMORY: 0.5MB • FREEWARE • FALCON-COMPATIBLE

The ARJ archiving format didn't really catch on that well, but that hasn't prevented the release of this simple extraction shell. The latest version handles the "Verbose" command offered by *UnArj 2.3*, but is otherwise identical to earlier incarnations.

8 SPEAKER OFF • FLOPPYSHOP • DISK NO: UTL.3834 • £2.00 • MEMORY: 1MB • PUBLIC DOMAIN • FALCON ONLY

As the name suggests, this utility disables the Falcon's internal speaker. It's best run from the Auto folder and saves you having to install Atari's *Control Panel* when memory is tight. Of course, all sensible Falcon owners will have disabled the internal speaker years ago...

9 TANDEM • MERLIN PDL • DISK NO: ESE.088 • £1.25 • MEMORY: 0.5MB • FREEWARE

Tandem forces some single-disk programs to work with twin drives. In other words, when a program asks the ST to look on drive A, *Tandem* jumps in and takes a peek at drive B too. It works with most program, but games are likely to cause a few problems.

10 SPRINT • FLOPPYSHOP • DISK NO: UTL.4539 • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN

A natty little printer spooler that not only buffers data but also manages to speed up output in the process! It works with the vast majority of "clean" applications and a desk accessory is included to play with the parameters.

PD ZONE

SHANGHAI DEMO

GOODMAN INTERNATIONAL • DISK NO: GF.95 • £1.95 • MEMORY: 1MB • BANNERWARE • FALCON ONLY

IN BRIEF: *Shanghai* is one of those board-games that was just made to be played on a computer. The gameplay itself is very straightforward – a stack of tiles sits in front of you and clicking on two identical symbols is enough to remove them from play. The catch is that both of the tiles must be on the top layer and there's usually a tight time limit to keep you perched on a razor edge between determination and frustration.

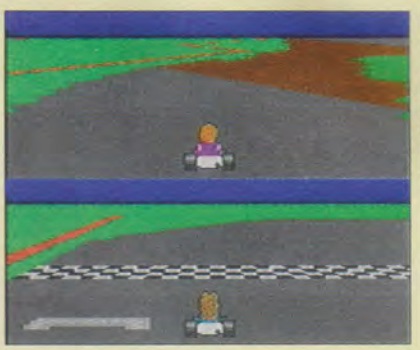
This Falcon implementation uses 256-colour, high resolution graphics and is a complete dream to look at. The backgrounds create a good oriental atmosphere and the full release is said to feature digitised music. You are limited to one minute per level in the demo version, which is a fairly hefty restriction considering the number of tiles on the table.

ST REVIEW COMMENT: "*Shanghai* is a well-groomed version of a classic game and looks spectacular in 256 colours. At £25 for the full version it's just a little bit on the "phew – I could buy two CDs for that!" side, but well worth a look at if you're a fan of the genre."

✪✪✪

The Japanese-style artwork makes Shanghai a joy to play, but the one minute limit sucks!

The game is very intuitive to play and the tiles themselves are nicely detailed.



Big Kart bears more than a passing resemblance to Mario Kart, but programmers forgot to add any gameplay!

BIG KART

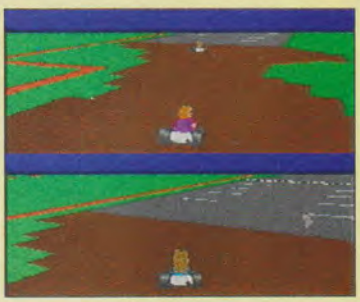
FLOPPYSHOP • DISK NO: F.4259 • £2.50 • MEMORY: 1MB • PUBLIC DOMAIN • FALCON (RGB) ONLY

IN BRIEF: Anybody who has played a SNES will know about Mode 7 graphics – the 3-D effect used to create classic games such as *F-Zero* and *Mario Kart*. Thanks to the DSP, the Falcon is also fully capable of this type of game and *Big Kart* is here to prove the point.

In actual fact, the demo is visually very similar to *Mario Kart*: little kid on four wheels, with 3-D surroundings. The game is playable in that you can steer, speed up, slow down and generally enjoy the scenery, but there's nothing to do beyond that. Mind you, it is a good deal more involving than many rolling demos and quite impressive from a technical standpoint. Now all we need is a clever coder to finish the job off (*and a barrister to deal with the lawsuits... Ed*).

ST REVIEW COMMENT: "If you want proof that the Falcon can quite easily handle Mode 7-style games, look no further. If you want a bit of gameplay to back up the premise, you're going to have to look quite a lot further – time to buy a Jaguar perhaps?"

✪✪✪



The Falcon throws the split-screen display around at an admirable rate – no sound effects though.

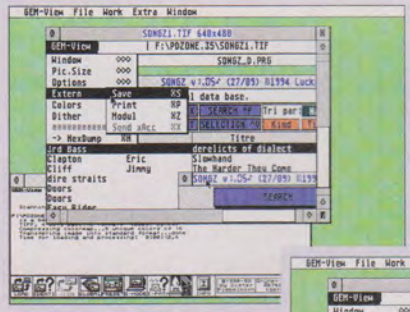
PC-MOUSE

FLOPPYSHOP • DISK NO: F.4632 • £2.50 • MEMORY: 1MB • PUBLIC DOMAIN • FALCON ONLY

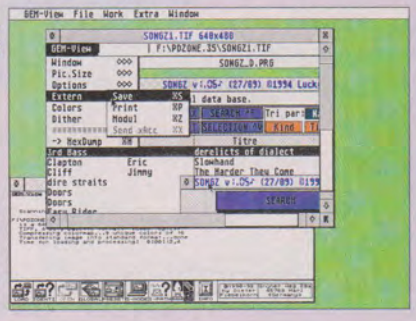
IN BRIEF: In many ways, a mouse is the most important peripheral you can attach to your Falcon, and yet the rodent that Atari ship with the machine can hardly be described as a quality piece of kit. Of course, the ideal solution is to buy a replacement, such as the Tecnoplus, but if money is a bit tight and you have a PC mouse kicking around, this utility is worth a go. Installing the software is a piece of cake – just plug the PC mouse into the serial port on the back of the machine, switch on, run the program and away you go. The documentation is scanty and in French, but once you're successfully up and running, there's not a lot to worry about. Compatibility is excellent with GEM applications, and you can always leave the Atari mouse plugged in for games and suchlike.

ST REVIEW COMMENT: "If you are well and truly sick of the standard Atari rodent, *PC-Mouse* is pretty good. The only slight niggle is that it ties up the serial port, rendering a modem useless."

✪✪✪✪



PC Mouse works with almost all applications and the ST rodent (more of a rat than a mouse) remains active to take care of any incompatibilities.



Just pop the program in your Auto folder and suddenly your Microsoft-compatible mouse sparks into life!

FaST Club

For users of Atari ST & Falcon computers

7 Musters Road - Nottingham - NG2 7PP
Tel: 0115-945-5250 - Fax: 0115-945-5305

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❒ Address 1.6	£12.95	❒ Mouse Tricks 2.15	£ 9.95
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❒ C-Font2	£ 9.95	❒ PageAssistant	£29.95
❒ CalAssistant	£19.95	❒ STC Calamus Fonts	£14.95
❒ CalAssistant SL	£29.95	❒ STC Fonts Catalogue	£ 2.95
❒ Clip Art Catalogues (2)	£ 4.00	❒ Ultimate Virus Killer 6	£12.95
❒ TW Clip Art Catalogue	£ 2.95	❒ Universal Item Selector III	£14.95
❒ Fontkit Plus 4.1	£24.95	❒ Warp 9	£29.95

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❒ Imagecopy 3.5 £29.95

❒ Copy images from screen in any ST/TT/Falcon video mode.

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❒ Create halftone images to use with other programs (wordprocessors etc.)

❒ Convert images between different formats or to different colour types.

❒ Batch processing facility: convert or print batches of images.

❒ Extensive range of image formats. Imagecopy can read and write: Degas, GIF, IFF, IMG, JFIF (JPEG), PC Paintbrush (PCX), Prism Paint, RSC free image, Targa, TIFF, and Windows Bitmap. Other read-only formats include: Art Director, Calamus Raster Graphic, DR Doodle, Macpaint, Neochrome, OS/2 Bitmap, Pictor, Pixart, Portable Bitmap, Spectrum, Tiny, and True Paint, XGA.

++ Major New Features in Imagecopy 3.5

❒ Thumbnail option that displays miniatures of a set of images within a single window. This is useful for looking through a disk of images or for creating disk catalogues.

❒ Nine zoom levels plus the ability to flip and rotate images. Screen images can be automatically scaled to fit the screen.

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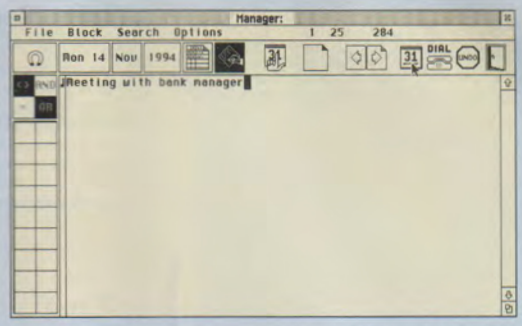
WELL MANAGED

Hot on the heels of last month's cover disk give-away, Ofir Gal takes you through the heart of Harlekin – the Manager...

This month's *Harlekin* tutorial concentrates on the Manager module, your computerised personal organiser. This interacts with the other modules and is highly configurable, enabling you to customise it to suit your needs. Use it to store appointments, telephone numbers, reminders and much more. Each note or event may be assigned an icon and you can even print out a daily planner.



After entering a new note, click on the Calendar icon to assign it a date.

GETTING STARTED

Click on the Manager icon in the main window. The file *UKDEMO* is loaded by default, so select **New** from the File menu to create a new database.

Let's enter some notes. Double-click on the **New Note** icon (see the *What 'n' Where* box) to open the text editor. Enter some text about the appointment. Our example is a meeting with the bank manager on December 7, at 10.30am. The Manager allows you to assign the date and time by clicking on the **31** icon at the top right of the window. This opens another window: type in the date and time of the appointment, and click on the **Update** button. Now close the window and exit the text editor by clicking on the door icon at the top-right corner. The entry will appear in the Manager window. Click on the **Month Display** button to see the monthly plan.

You now have your first entry in the Manager. When you close the window you'll be prompted to save the information. Make sure you save it, giving it a name like *DEFAULT.MAN*. You can also make *Harlekin* load this file automatically at boot time by selecting the paper clip icon in the main window and saving the default set-up.

MORE ENTRIES

Harlekin can automatically repeat notes like birthdays and public holidays. Click on the **New Note** icon to enter a new event and enter "Pay day" in the text editor. Next, click on the **Calendar** icon (the one with "31" to the right) to assign a date to it. Enter "28/01/94" in the Begin line and then click on the **Repeat Note** button.

The dialogue box that appears allows you to automatically repeat a note every week, month or year. Select Month and click on "OK" to confirm. Back in the Calendar dialogue box click on Update, close the window and exit the text editor. This event will now appear automatically every month in your diary – see this by clicking on the **Year** display icon.

USING ICONS

Now let's add a few more entries and see how icons can be used to group them and make notes easier to access. *Harlekin* allows you to view events in your diary depending on their type. Let's see how this is done by entering some more notes.

Select **Edit Icons** from the Options menu. This displays the icon editor where you can create your own icons or simply load in the presets supplied on the *Harlekin* disk. Make sure that the cursor is placed on the top-left box and click on the Load button. Find the icon files which are located inside the *MANAGER* folder in the *HARLEKIN\BIN* folder. Select *PHONE.ICN* and click on "OK". Back in the icon editor, click on Insert. You can now move the icon cursor to the next box and repeat this procedure. Up to 12 icons can be used.

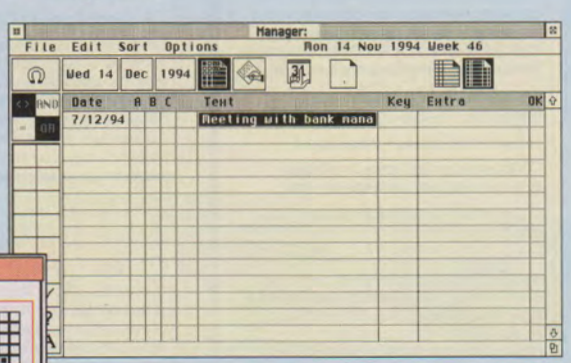
Click on the **New Note** icon and enter "Phone HiSoft - 0525 718181". The icons on the left are displayed in grey. Before you exit the note editor, click on the **telephone** icon. Once you return to the main Manager window you'll see that the icon is displayed next to the note. You can assign icons to other notes by double-clicking on them and selecting the required icon.

Enter a few more events such as birthdays and various appointments, assigning each a date in the calendar and an icon.

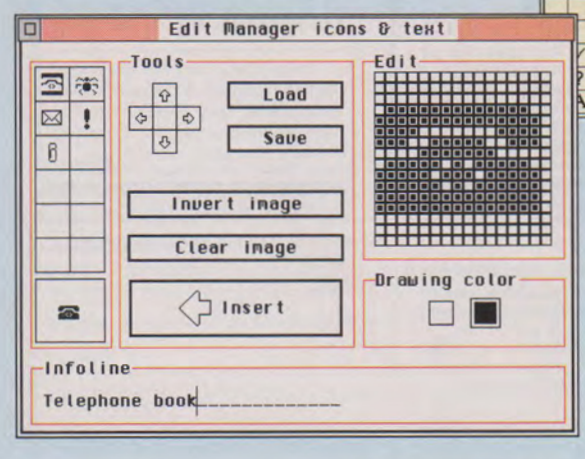
POINT OF VIEW

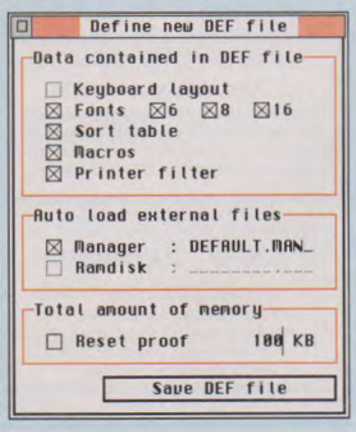
The Manager allows you to view your notes and events in various ways. Let's try some of these display modes. Events can be sorted according to name, date, icon, size and priority – the sort by date option can be very useful. The **Magnet** icon at the top-left corner lets you view events by their icons. Select the magnet and

A complete note should appear like this. Change to a daily, monthly or yearly display by clicking on the icons at the top right.



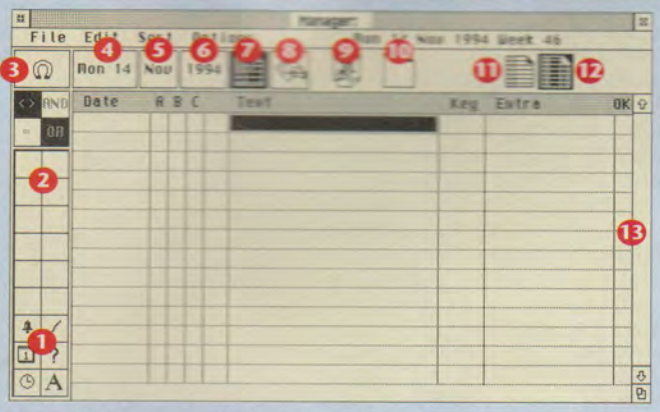
Load existing icons or create your own with the Icon Editor.





Clicking on the paper clip icon in the main window makes the Manager load your new database by default.

WHAT 'N' WHERE



The main Manager window has various icons that are used for creating notes and changing the display modes...

1. System Icons
2. User icons
3. Icon magnet
4. Day display
5. Month display
6. Year display
7. Note list
8. Note editor
9. Show today
10. New note
11. Simple display
12. Detailed display
13. Note check mark

then the "=" and "OR" icons below it. This mode displays only items that correspond to the selected icon on the left. To view all telephone calls, for example, select the telephone icon. You can select more than one icon at a time and view a combination of notes and events.

In addition, you can view a yearly, monthly or daily plan by clicking on one of the icons on the left. The left and right arrow icons that appear in these modes allow you to advance the display.

Once a note is no longer applicable, place a tick in the "OK" column of the main display. Click on the **Note List** icon and double-click in the "OK" column next to the note. The Manager has a special mode that removes ticked items from display *without* erasing them. To enable this mode, go through the following steps:

- Select the Magnet icon
- Select the <> and OR icons
- Deselect the Magnet
- Select the tick icon on the right

USING THE CLIPBOARD

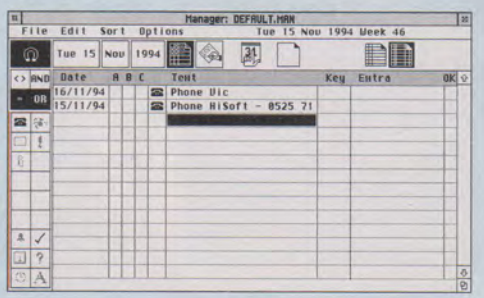
***Harlekin* supports the GEM clipboard: text can be copied from the editor and pasted into another application and vice-versa. This is extremely useful as *Harlekin* can run alongside your word processor or DTP package.**

The clipboard commands follow the standard keyboard shortcut guidelines. Cut, Copy and Paste are accessed by holding down <Control> and pressing <X>, <C> and <V> respectively. For this to work correctly, set up the clipboard using the Atari CPX or a similar utility.

PRINTING

You can produce a printout of your notes directly from the Manager by selecting **Print** in the File menu. The printout depends on the current display mode so select the **Day Display** icon first. In the Print dialogue box, decide whether you want to print frames around each note and event. If you do, make sure your printer is set to use the IBM character set, otherwise the results will be less than attractive. To change the page layout, click on the button and a second box is displayed where you can set the header and footer as well as other parameters.

Each note or event can be given an icon. The Magnet icon displays notes that share the same icons.



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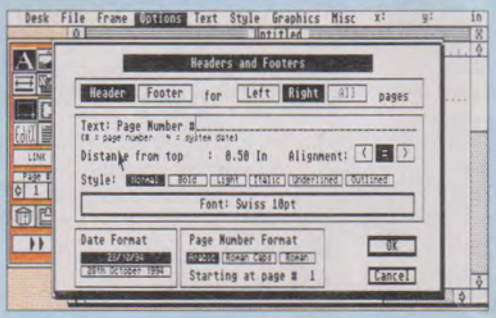
DOUBLE TROUBLE!

Multi-page documents are a piece of cake with Easy Text Professional! Nial Grimes forges further into the fascinating world of desktop publishing...

Desktop publishing is fast becoming as popular as word processing among home-computer users. However, in common with any other skill, DTP needs to be learned. The techniques we've explored so far form the basis of desktop publishing, but *Easy Text Pro* is still only firing on one cylinder. Let's move up to full speed by exploring the issue of multiple page documents.

PAGE POWER

The differences between designing single and multiple-page publications are evident from the word go. When you think about it carefully, multiple page documents are totally different in structure. Take the margins: a single page is likely to have the same amount of blank space on both the left and right-hand side, while bound sheets will naturally provide more of a buffer on the left. And the situation changes again when dealing with double-sided printing – in this case, the size of the left and right margins will alternate.



Standard info can be placed at top and bottom of the page with the help of headers and footers.

Fortunately, *Easy Text Pro* is clever enough to take care of most of these problems for us, but you do need to warn it that you will be using more than one page. This is accomplished through the dialogue box that appears when you click on "New" from the "File" menu – you can choose to go for either a single or double-sided layout.

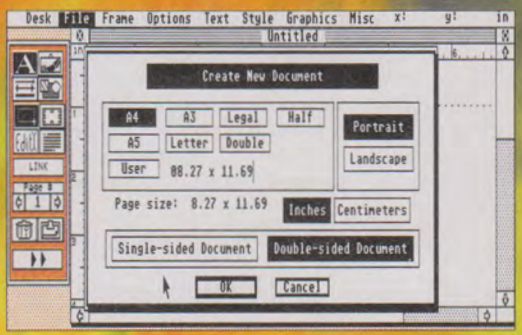
Some of *Easy Text Pro*'s dialogue boxes work in a different way when a double-sided layout is in force. For example, take a look at the "Column Guides" and you'll notice that "Left" and "Right" have been replaced with "Inner" and "Outer" – the exact settings you enter here will depend on the type of binding you use.

A new page can be physically bolted on to a document through the "Add page" menu option and you can navigate your way backwards and forwards by using the ➢

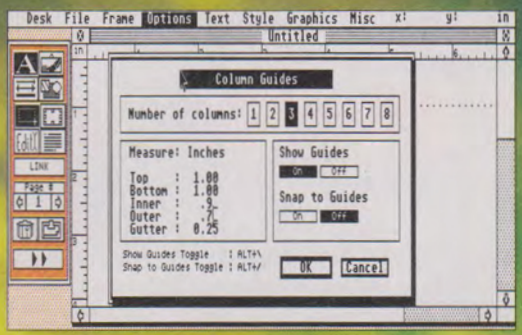
STEP BY STEP GUIDE

HEAD OVER HEELS

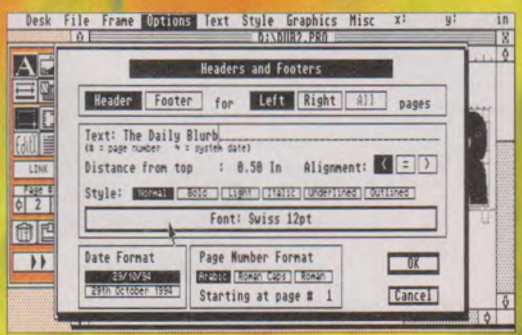
Raring to get going on your first real document? Let's whip up a two-page spread from a fictional newsletter...



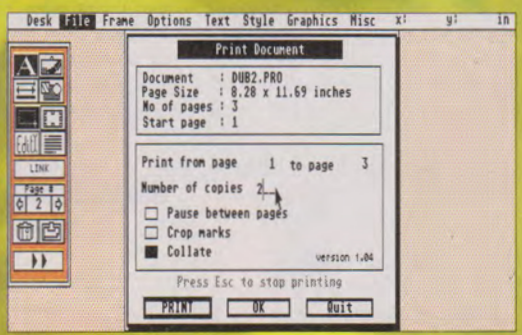
1 ***Create a new, double-sided A4 document and jump into the "Column Guides" dialogue box. Change the number of columns to three and alter the inner and outer margins to read 0.9 and 0.7 inches respectively.***



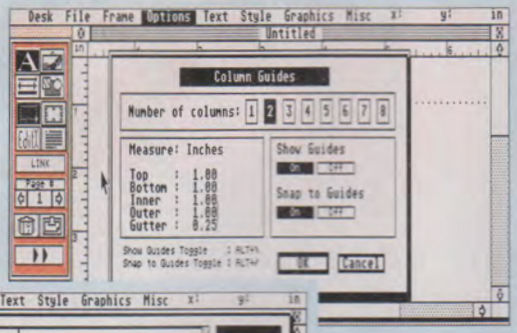
2 ***Now beef your document up to three pages and put the design itself on the second and third. This is necessary because Easy Text Pro always starts with a right-hand page.***



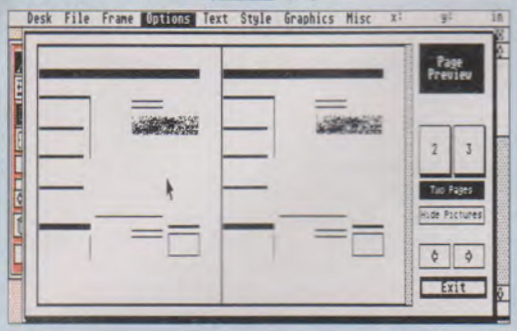
3 ***Move to the "Headers and Footers" dialogue box and enter the necessary text. Alignment should be to the left on left-hand pages and to the right on right-hand pages.***



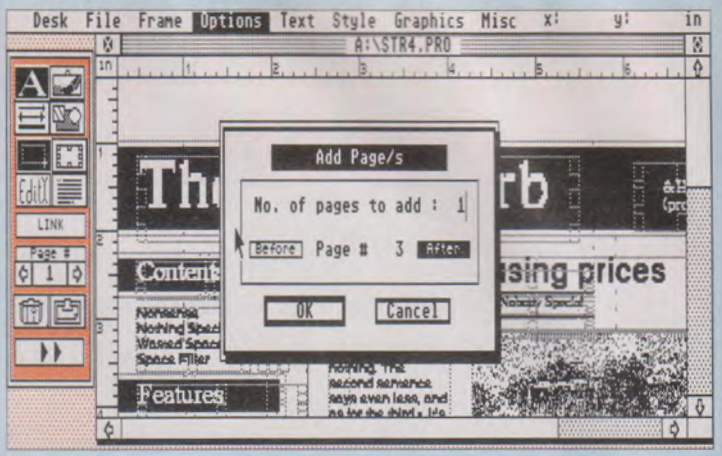
4 ***Print out the results and you will find that the margins allow space for binding down the centre and that the headers and/or footers are positioned neatly on the outer edge of each page.***



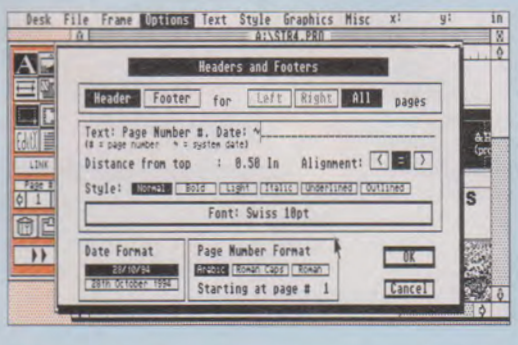
The outer and inner margins are alternated on double-sided documents to allow room for binding.



The preview panel comes into its own when dealing with multi-page documents.



One or a number of pages can be slotted into a document with the help of the "add page" dialogue box.



The "#" and "~" characters are used to add the current page number and date to your headers and footers.

arrows in the icon panel. Mind you, it's usually quicker to opt for the "Go to page" dialogue box if you will be moving a long way – it saves an awful lot of screen redraws. One problem that will crop up as you begin to work with larger documents involves linked text. *Easy Text Professional* only allows one piping chain per document, so the best option is to create a new file for each article or section in your publication. This also has a useful side-effect of reducing memory requirements and increasing the speed of some operations. In practical terms, it all boils down to planning your publication before you actually design it.

AHEAD OF THE GAME

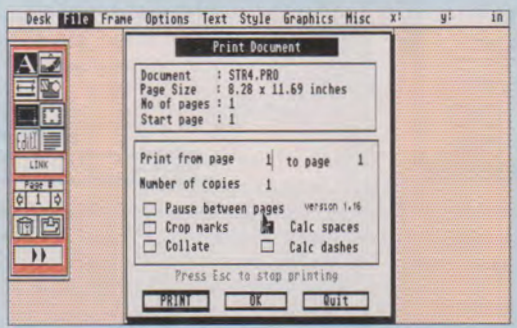
As your documents begin to break the single sheet barrier, the matter of page numbers rears it head. Of course, these can be laid in manually, but it's far easier to let *Easy Text Pro* take the strain through the use of "headers" and "footers". A good example of a footer can be found at the bottom of this very page – yep, it's used for the page number.

Headers (at the top of the page) and footers (at the bottom) are not limited simply to numbers though – they can contain any text you choose to put in them, plus a range of special characters. For example, a hash is used to represent the current page number so, "Page # of 20", would become "Page 1 of 20" on the first sheet, "Page 2 of 20" on the second and so on. Less useful is the facility to add the current time and date to the header – in this case, the magic character is "~". The "Start at Page" entry comes into play if you do the decent thing and break your documents down into smaller chunks. The software can still deal with page numbers – just give it the first number in the current chunk.

As you'd expect, the full range of typefaces and styles can be used in a header or footer, by clicking on the "Font" button. All adjustments are made through the standard selection box, so there are no complications to get in the way. If your printer has trouble reaching the bottom of a sheet, you might like to push the footer further into the page by increasing the relevant measurement.

A separate header and footer can be used for left and right facing pages. The reason for this may not be immediately obvious, but cast your eyes back down to the bottom of this page again – notice that the position of the numbers changes depending on the facing of the page. It simply wouldn't look right if both of the numbers were on the left (or the right, for that matter).

It's a good idea at this stage to simply print out a blank double-sided document with headers and footers. This will give you a practical example of how the margins are affected and also how headers and footers fit into the general design of a page.

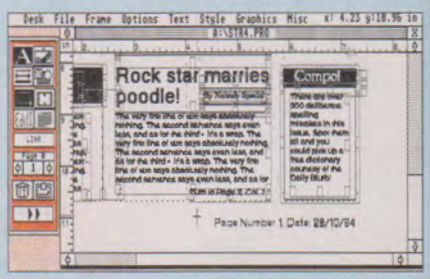


If you are printing more than one copy of a document, use collation – it saves having to reorder the pages manually.

SMALL PRINT

Having manhandled your first real document into shape, it's print time and yet again, there are decisions to be made. The "collate" button box forces *Easy Text Pro* to print the document in sequence when more than one copy is involved. In plain English, this means that two copies of a three-page document would be printed in the order 1, 2, 3, 1, 2, 3, as opposed to 1, 1, 2, 2, 3, 3. Crop marks on the other hand provide visual markers at the edge of the page.

And that brings to a close your first mission into proper, multi-page desktop publishing. You've learned how to add extra pages to a document, the practicalities of headers and footers and also the differences between single-sided and double-sided designs. Next month we'll round off our tutorial with some essential tips and tricks. See you there...



Any changes to the headers or footers are immediately reflected on-screen.

ALL KEYED UP!

Experienced ST users will find *Easy Text Pro's* range of keyboard shortcuts invaluable. They aren't always time-saving when it comes to straight-forward menu items, but add a couple of dialogue boxes and it's a different matter altogether. For instance, "snap to guides" can be enabled or disabled by simply stabbing the <Alt></> combination. The full range of shortcuts can be found in the *Easy Text Pro* manual, but here are few of the more useful specimens:

<Alt><C>: Copy frame
<Alt><[>: Rulers, frames and columns off
<Alt><]>: Rulers, frames and columns on
<Alt><\>: Toggle column guides on/off
<Alt></>: Toggle snap to guides on/off
<Alt><M>: Cycle through ruler measurement systems

UNLOCK EASY TEXT PROFESSIONAL

Get the manual, more fonts and even the latest version of Easy Text Professional Vector 2 that supports SpeedoGDOS!

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135-page manual including instructions for *Easy Text Professional* and *Easy Text Professional Vector*.

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☐ FULL 3-DISK SET OF EASY TEXT PROFESSIONAL	£7.99
☐ RINGBINDER FOR MANUAL	£2.99
☐ FONTS DISK: 9-PIN DOT MATRIX	£5.00
☐ FONTS DISK: 24-PIN , 180x180dpi	£5.00
☐ FONTS DISK: 24-PIN/BUBBLEJET, 360x360dpi	£5.00
☐ FONTS DISK: DESKJET/LASER, 300x300dpi	£5.00
☐ EASY TEXT PROFESSIONAL VECTOR 2	£10.00
☐ EASY TEXT PROFESSIONAL VECTOR 2 PACKAGE	£64.99
☐ SPEEDO OFFICE PACK	£49.99
☐ SPEEDO GOLD PACK	£49.99
☐ 40 TRUETYPE FONTS	£12.99
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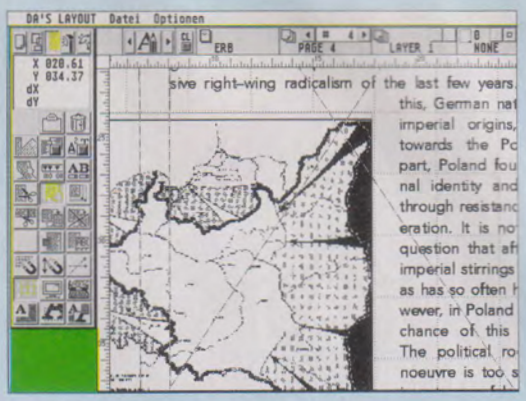
There's more to a good page layout than meets the eye. Günter Minnerup reveals the mysteries of the invisible grid...

BETTER BY DESIGN

Imagine your favourite newspaper abandoning its usual multi-column design and filling each page with just one large column across the full page width. Different stories would no longer be running in parallel along the vertical axis, but would be set sequentially like chapters in a book. The typeface, its size and the line spacing would be unchanged. The result would be impossible to read comfortably, because individual lines would be extremely long and set too closely together. Your eye would get lost in this sea of type, continuously jumping from the current line to the one above or beneath it.

This is precisely why multi-column designs were invented. The human eye is most comfortable at reading lines that are neither too long nor too short, and needs to be guided along the text by the right distance between separate lines. The only way that such a one-column newspaper design could work would be to choose a much larger type size and much larger line spacing, which in turn would be uneconomical. We shall take a more detailed look at the relationship between line length, point size and line spacing in a future instalment of this column: for the time being, let's state the fact that the number of columns for your page design cannot be decided in isolation from such typographical considerations.



The vertical grid unit in this DA's Layout page equals three text lines, so facilitating alignment of pictures and text.

Single column layouts are generally used in books and other documents where the purpose is the straight-forward presentation of text. As soon as graphics enter the equation, another advantage of multiple columns is revealed: the much greater flexibility in the placement of illustrations. Multiple column layouts are livelier, and the more columns they have, the livelier and more flexible they are. For example, six fairly narrow columns, as used by many magazines, can provide the basic structure for text and pictures extending horizontally over one single, two, three or even four columns, with several column widths being used on the same page for different items, all superimposed on the underlying six columns. You will find plenty of examples by simply scanning the pages of *ST Review* for examples of the flexible application of its basic four-column grid.

The more graphics-intensive a design, however, the more important it becomes to impose an underlying structure along the vertical as well as the horizontal axis of the page. Suppose you set your text in a simple three-column arrangement and now need to place a few photographs, cartoons and other graphical elements. The columns will dictate their horizontal placement, but where exactly do you position them along the vertical axis? The same dilemma applies to the exact positioning of items such as headlines, folios (page numbers), running headers and ruler lines.

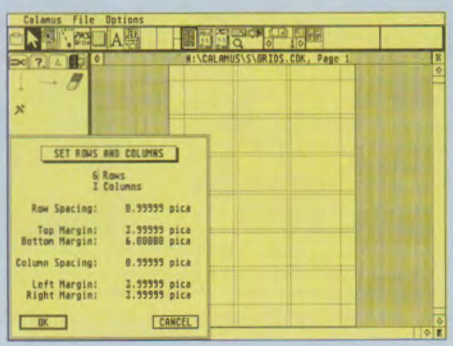
GRIDLOCK

This is why most page designs are based on an underlying grid that divides the page into vertical as well as horizontal units. Just flicking through the pages of any design-intensive publication will quickly show you how the vertical placement of the page elements is not arbitrary but follows a consistent pattern based on multiples of a particular vertical grid unit. In amateur DTP products, by contrast, these elements are frequently all over the place, giving a restless, chaotic and unprofessional impression.

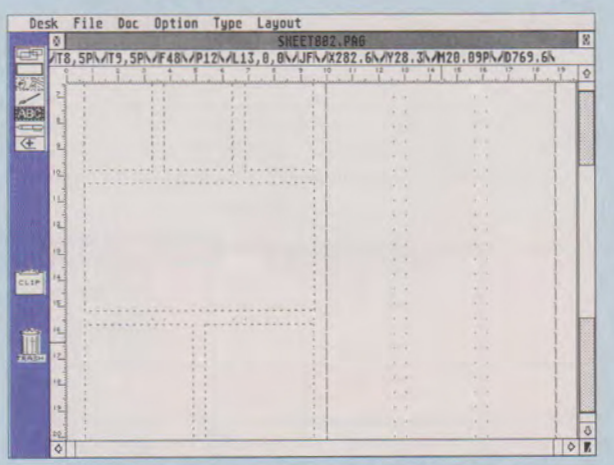
The vertical grid units are usually much smaller than the horizontal ones, for added flexibility. A three-column design will, for example, often have four to six "rows" because anything less will result in schematic, lifeless designs – too much consistency quickly becomes boring! In many cases, the vertical grid unit is identical with the line height, defined as point size plus line spacing (leading), to ensure exact alignment of text and pictures. For beginners, however, this does not offer much help in the positioning and sizing of illustrations so it is advisable to use much coarser grids, but still using vertical units that are multiples of the text line height.

The "snap-to-grid" feature offered by most desktop publishing software will make precise positioning very easy, but don't become a prisoner of your own grid: it should be a productive aid, not a restrictive straight-jacket. Good design is not mechanical, and overstepping the grid lines can sometimes add a touch of life to an excessively tidy page. So don't be afraid to disable the "snap-to-grid" occasionally!

Next month, we'll move on to using Master pages...



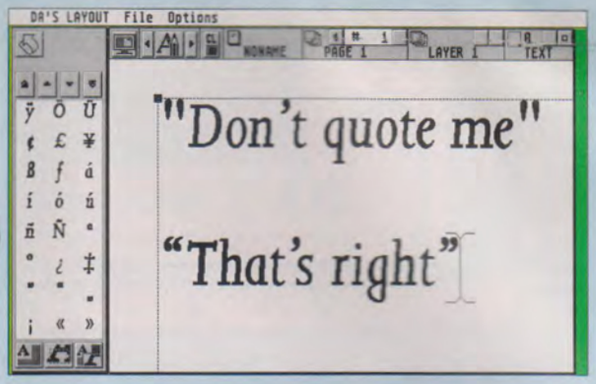
Calamus allows the precise definition of horizontal and vertical and grid units. Use multiples of the line heights for easy alignment of text and graphics.



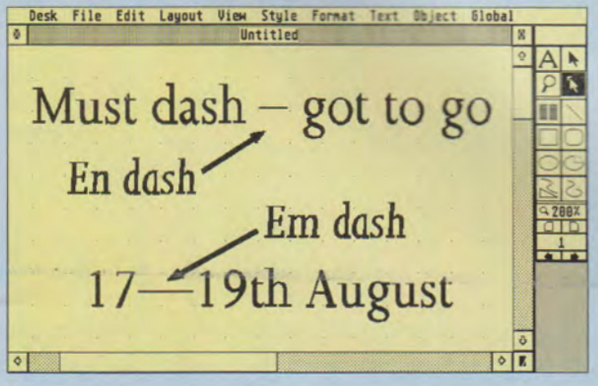
An example of how a basic six-column grid can be used flexibly to provide a variety of column widths on the same page.

TRUE TO Type

This month, Andrew Wright reveals the hidden side to his character set...



Proper quote marks look much better.



Using en and em dashes.

A typeface isn't just made up of stems, strokes and serifs: it comprises a wide range of characters. Some of them are widely used, like the upper and lower case alphabet, the numerals and the common or garden punctuation marks. Others are used less often, largely because they aren't actually displayed on the keyboard.

The standard quotation marks that are included in most fonts (a shifted number 2 on the keyboard) are good enough for most purposes, but for a really professional looking document, the correct quotation marks are a must. By correct, I mean the opening and closing quotation marks, often referred to as the "66" and "99" quotes, or curly quotes.

Less important, but still worth using, are the en and em dashes and ligatures. Hyphens are available from the ST's keyboard just to the right of the zero key on the top row, but they should only be used to denote words that are split up onto different lines (hyphenated) and in mathematical equations.

The use of the en and em dashes can vary. I would recommend using the shorter en dash to separate phrases where a full stop is too strong but a comma is too weak. Remember to insert a space on either side too. The longer em dash can be used in dates or times but it doesn't require spaces on either side.

Ligatures are characters made up of two characters blended together with the combinations f/i and f/l being the most common. These ligatures occur because of the font's design characteristics: when an "f" and an "i" are placed next to each other, the top of the letter "f" will often touch the dot of the letter "i". This looks ugly and hence the ligature was born. In day-to-day DTP, I wouldn't expect anyone to use them but occasionally they may be required in headlines or titles.

CHARACTER BUILDING

Unfortunately, whether or not you can actually get at these characters will depend on the application you are using. All the high-end DTP programs that use professional outline font formats, such as *Calamus* or PostScript, support the special characters. This list includes *Calamus*, *DA's Layout* and *Pagestream*.

Pagestream relies on reference tables that you have to consult to find the key combination or mnemonic that inserts the desired character. For example, to produce an opening quote mark, type <Control><D> and then the digits 1, 6 and 9 (169 is the character code). The closing quote is <Control><D> followed by 1, 7 and 0.

DA's Layout and *Calamus* offer a menu that you can browse through to find the character you need, in addition to using key combinations.

Unfortunately, many PD PostScript and *Calamus* fonts don't have a full character set and others, generally those originating from abroad, have characters in the wrong place. *Fonty*, a cheap font editor available from the FaST Club, can be invaluable in editing and sorting out fonts from these sources.

GDOS FONTS

The standard Atari character set doesn't have the en and em dashes or even opening and closing quotes, with the result that many *GDOS* fonts don't have them either, unless they have been substituted for another character. The fonts supplied with *Timeworks 2* have the opening and closing quotes but not the en or em dashes, while the fonts supplied with *Easy Text Professional* use only the standard Atari character set and have none of these characters.

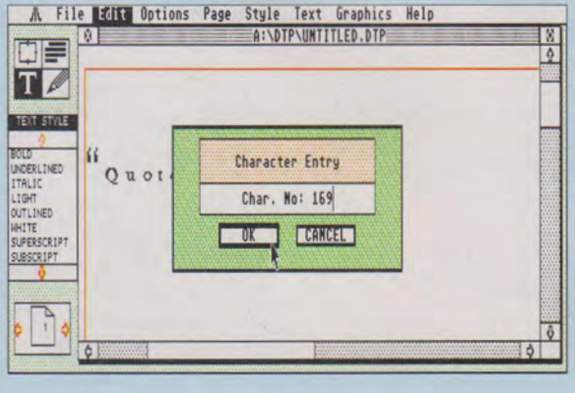
In *Timeworks 2*, the closing quote is accessible from the keyboard (<Shift><2>) while the opening quote is included as character 169 and can be accessed via the Character Entry dialogue box.

SPEEDO FONTS

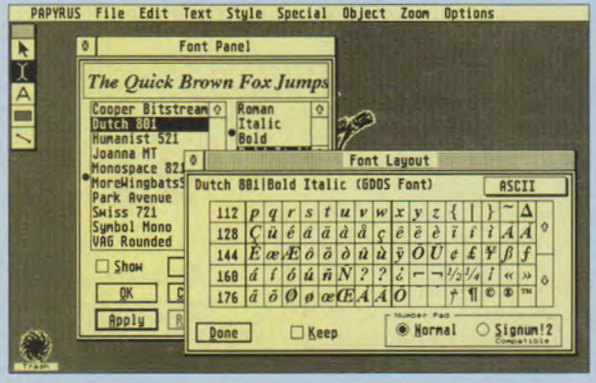
Speedo format fonts have no less than 564 different characters. The extra characters aren't normally accessible from the keyboard at all, though, even in *SpeedoGDOS*-based applications, because the maximum number that can be made available at any one time is 256.

It is possible to create Character Set Description files (**.CSD*) to change the characters that can be accessed from the keyboard and *NVDI 3.0* is rumoured to be able to support this feature using a small utility that will be supplied with the program.

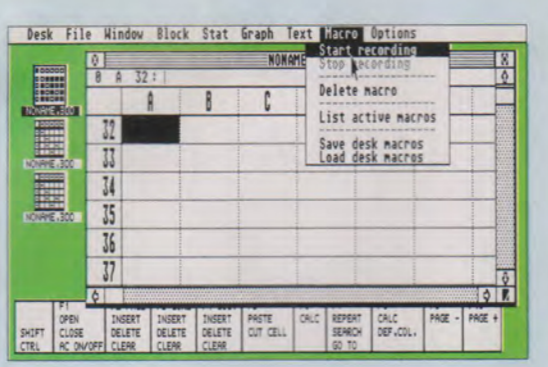
This should be good news for *Papyrus* users. At present there are no open and close quotes available when using *Papyrus* with Speedo fonts – if you need them you'll have to use PostScript fonts instead (press the *Alternate* key followed by 169 or 170).



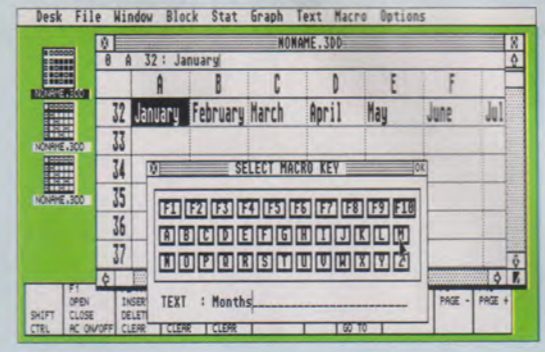
Accessing the quote marks in Timeworks 2.



The special characters in Papyrus – you can see that the opening and closing quotes are absent...



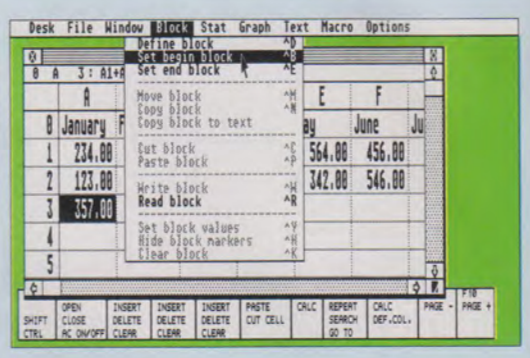
To begin recording your macro, click on the cell where you want to start the sequence of events and then choose Start Recording from the Macro menu.



This is where you assign your macro to a key and provide it with a name.

JUST THE JOB

Richard Williams looks at how macros can automate repetitive procedures, saving you time, effort and tedium...



"Blocking" cell A3 so that it can then be copied to its neighbouring cell on the right.

Did you know that some small businesses do *all* of their accounting and bookkeeping in a single spreadsheet that just grows and grows? Once people learn the basics of spreadsheeting, they realise how easy it is to copy formulae, rows of dates or even an entire year's worth of the worksheet, creating "templates" whenever they need them.

The sheet gets bigger and bigger – and as a friend, who runs a small software marketing business, always tells me: "A good spreadsheet is one that's kept as simple as possible yet shows you everything you need to know. You can record every transaction in it, complete with VAT analysis, all totalled up for the day you have to send off your returns..."

A few months back, I asked him how much use he made of macros. "What are they?", he replied. He uses *3D-Calc*, and yet he hadn't noticed the second-to-last item on the menu bar: Macro. "I don't bother with anything fancy at all – just a simple spreadsheet that shows me everything I want to know..."

After much cajoling, he's coming round to viewing the macro as a useful time-saver. For a start, he now has a macro that loads his one spreadsheet file (sensibly backed up twice onto separate floppy disks) automatically, so saving the tedium of locating it via the file selector. He's also building up a library of macros, with meaningful names, that perform what would otherwise be quite time-consuming operations.

MACRO, SHMACRO...

A macro is a series of keystrokes and/or mouse clicks that are recorded by your ST and then replayed precisely, but at considerable speed. Many programs include such a feature and certain macro programs can work with almost anything, including your desktop.

3D-Calc has two kinds of macro: Spreadsheet and Desk. The former is linked to, and works in, an individual spreadsheet file; the other works on any spreadsheet file. As a simple example, let's take entering the months of the year horizontally in adjacent columns. The procedure is as follows:

- With a spreadsheet file loaded, or a new one just created, position the cursor in the cell where you want the first month of your year to be placed.
- Click on Macro in the menu bar, and choose Start recording.
- Type "January" (or whatever month you wish to begin with) and press the right arrow key to move to the next cell along. Type the next month and press right arrow, repeating the process until all 12 months have been entered.
- Click on Macro in the menu bar again, and choose Stop recording. The Select Macro Key dialogue box appears. Spreadsheet macros are replayed with a standard letter key: select one and type in a brief description of the macro in the Text field. "Months" will do in this case.
- Click on "OK" in the top right-hand corner of the dialogue box.
- The macro has now been created, and will be saved with the file. To check that it is working, click on the cell immediately below the first month you typed in. Hold down the <Alt> key and press the key you chose in the Select Macro Key dialogue box. You should see all 12 months of the year appear!

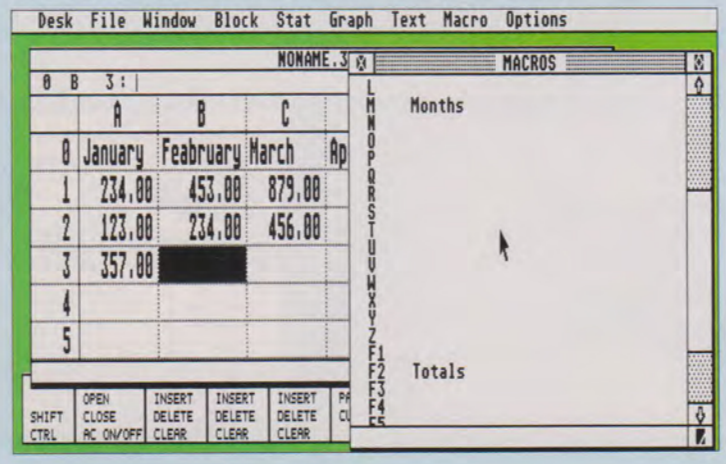
Desk macros are similar: use them for common tasks like copying a formula for adding up columns of figure. You can see which spreadsheet macros are active at any time by choosing the List active menus option from the Macro menu.

With *3D-Calc*, you can create a special macro (*3D-CALC.MAC*) that makes certain actions happen automatically when the program is started. For instance, you could make it load a particular worksheet or open a window. You must assign this macro to the <F1> key.

FINAL WORD

This has been a major boon for my business friend. He autoloads his one, ever-growing spreadsheet file, and has automated about 50 per cent of his operations. "Just think," he said the last time we met, "how much time you could save if you were running half a dozen applications, with several files in each one, and had macro capabilities for all of them!"

He's getting there – even if it is rather like waiting for British Rail...



You can see which 3D-Calc macros are active at any time by choosing the List Active Menus option from the Macro menu.

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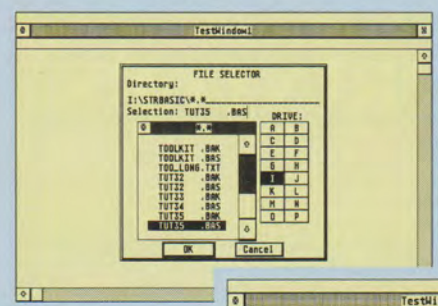
A GOOD

Following on from last month's exercise in windows, Ofir Gal looks at how to incorporate scrolling...

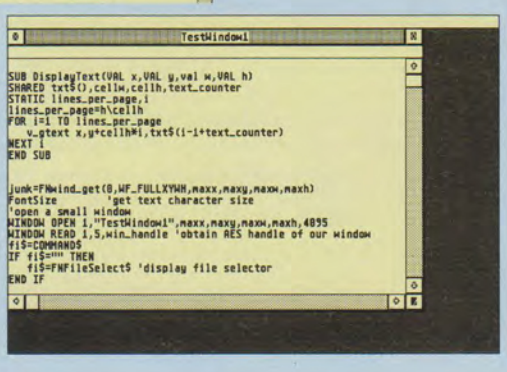
In the last few tutorials I have introduced the basic techniques of window handling under GEM. Last month's test program opens a window and responds to user actions like moving and resizing. Is the program a long way off from being a file viewer? No! You'll be surprised at how easy it is to display text in the window. The most difficult part is implementing text scrolling, but first let's include the text loading and file selector routines.

WELL LOADED

This aspect was discussed back in issue 32. The routines *FNfileselect$* and *LoadTextFile* are included in the tool-kit file on the cover disk. *FNfileselect$* is used to display the file selector and allows the user to select a file to load. *LoadTextFile* takes the file name as a parameter and loads the text into the array *txt$()*. As explained in previous tutorials, the routine *FontSize* must be called at startup. This determines the size of the system font by calling the VDI, and places the result in the variables *cellw* and *cellh*. These values are typically 16/8 in high resolution and 8/8 in others, but a good GEM program never makes such assumptions: always inquire the current values from GEM. The values are used by the routine *DisplayText* to calculate the positioning of text in the window. You never need to explicitly call *DisplayText* as it is automatically called by *WindowRedraw*. The startup code is shown in listing 1. First the screen dimensions are obtained, then the font size. Next, the program opens a window to the full size of the screen and immediately finds the AES handle of the window using *WINDOW READ*. The file selector is displayed and if the user selects a file, it is loaded into the *txt$()* array. At this point the program calls *WindowRedraw* to display the text. Notice that the redraw rectangle is the full size of the screen. *WindowRedraw* intersects this with the real window coordinates and only redraws the current work area of the window. All further redraws are handled automatically by *WinMessage*. All the mentioned routines are included in *TUT35.BAS* and *TOOLKIT.BAS*.



The program starts by displaying the file selector – you can even view your own BASIC source code.



The scroll routines are basic, but they work! Optimising the scrolling speed will be the subject of next month's tutorial.

```
LISTING 1

junk=FNwind_get(0,WF_FULLXYWH,maxx,maxy,maxw,maxh)
FontSize                    'get text character size

'open a small window
WINDOW OPEN 1,"File Viewer",maxx,maxy,maxw,maxh,4095
WINDOW READ 1,5,win_handle    'obtain AES handle of our window
fi$=FNFileSelect$             'display file selector
if fi$="" THEN SYSTEM         'no file was selected so quit
LoadTextFile fi$
WindowRedraw win_handle,maxx,maxy,maxw,maxh
```

```
LISTING 2
'window scrolling

SUB WindowArrowed(VAL WindowHandle,VAL type)
SHARED cellw,cellh,text_counter
STATIC x,y,w,h,lines
junk=FNwind_get(win,WF_WORKXYWH,x,y,w,h)
lines=h\cellh
SELECT CASE type
  CASE WA_UPPAGE:text_counter=text_counter-lines
  CASE WA_DNPAGE:text_counter=text_counter+lines
  CASE WA_UPLINE:DECR text_counter
  CASE WA_DNLINE:INCR text_counter
END SELECT
IF text_counter+lines>1000 THEN
  text_counter=1000-lines
END IF
IF text_counter<0 THEN text_counter=0
WindowReDraw WindowHandle,x,y,w,h
END SUB

SUB DisplayText(VAL x,VAL y,val w,VAL h)
SHARED txt$(),cellw,cellh,text_counter
STATIC lines_per_page,i
lines_per_page=h\cellh
FOR i=1 TO lines_per_page
  v_gtext x,y+cellh*i,txt$(i-1+text_counter)
NEXT i
END SUB
```

SCROLLING ALONG

A text viewer is not much use if you can't scroll the text, yet scrolling is not as easy to add as previous window functions. Like redraw and move, the AES generates a message whenever the user clicks on the window arrows or sliders. The message type *WM_ARROWED*. *mess(3)* contains the window handle as usual while *mess(4)* indicates which arrow action took place. There are eight possibilities, denoted, as constants which are defined in the file *AES.BH* on the cover disk. See the *Window Arrow Messages* box for a full list of *WM_ARROWED* messages.

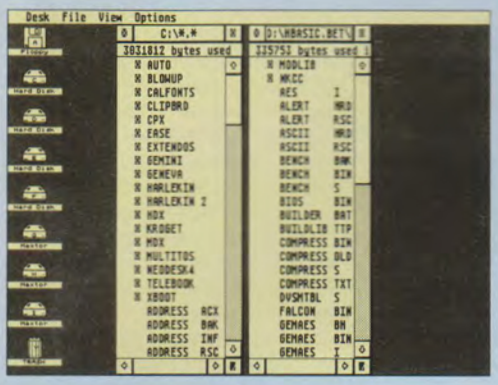
As there are a multitude of possible actions here, a separate routine has to handle the various arrow events using a SELECT CASE statement. The new sub-routine is called "WindowArrowed" and is shown in listing 2. An additional SELECT condition for *WM_ARROWED* messages should be added to *WinMessage* to call *WindowArrowed*:

```
CASE WM_ARROWED
  WindowArrowed
mess(3),mess(4)
```

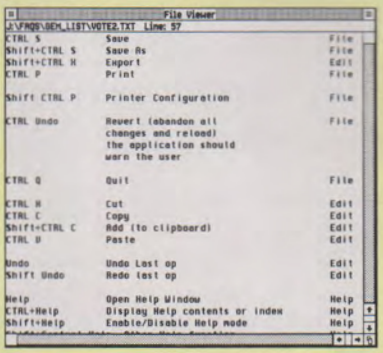
WINDOW ARROW MESSAGES

Name	Value	Meaning	Cause (user action)
WA_UPPAGE	0	Scroll one page up	Click above vertical slider
WA_DNPAGE	1	Scroll down page up	Click below vertical slider
WA_UPLINE	2	Scroll one line up	Click on top arrow
WA_DNLINE	3	Scroll one line down	Click on bottom arrow
WA_LFPAGE	0	Scroll one page left	Click left of horizontal slider
WA_RTPAGE	1	Scroll down page right	Click right of horizontal slider
WA_LFLINE	2	Scroll one character left	Click on left arrow
WA_RTLINE	3	Scroll one character right	Click on right arrow

SELECTION



The window sliders under GEM change their sizes to give the user an indication of the size of a document or how much further there is to scroll before reaching its end.



The correct approach to GEM programming produces programs that run well with any system modification or in a multi-tasking system. The file viewer is shown here running under WinX.

WindowArrowed in itself is fairly complex. It uses a new SHARED variable called *text_counter* with an initial value of 0. The *text_counter* is then used to draw the text in *DisplayText*. When the user clicks on the down arrow, the *text_counter* is incremented and *WindowRedraw* is called. Page scrolling is similar, but the counter is incremented by the number of lines in the window.

IFS AND BUTS...

The IFs and buts at the end of *WindowArrowed* are designed to stop the user from scrolling beyond the start or end of the *txt$()* array. You can now compile the program and scroll through the text. The first thing you will notice is that the speed of the scrolling is unacceptable! This is because we are not using the proper scrolling method yet which involves moving blocks of screen memory around – very effective, especially if you have a Blitter chip installed or *NVDI*.

The *LoadTextFile* routine keeps a count of the number of lines in the file. Not surprisingly, this SHARED variable is called *no_of_lines*. *WindowArrowed* makes use of this variable to limit the scrolling so that the user can never scroll beyond the end of a text file. Simply use this value to limit the maximum value of the *text_counter* in *WindowArrowed*.

WINDOW ANIMATION

One GEM feature that is missing from our program is the animation of the sliders while scrolling. This serves the dual purpose of moving the slider so that you can also scroll back and of giving the user some visual feedback. Unlike PC *Windows* or *System 7* on the Mac, GEM uses proportional sliders.

These not only indicate the position of the document, but also provide a clue as to the size of the file. Next month we will look at improving the scrolling by adding the slider animation routines and by adding VDI calls to allow fast and smooth scrolling.

THE INFO LINE

So far, we have made little use of the window info line. The name of the file and the current line number are normally useful and can be displayed using a version of *WINDOW NAME*. Normally the format is *id,text*. An additional coma is used to change the text in the info line. The *TextDisplay* routine only needs a slight modification for the sake of user-friendliness; listing 3 shows how the info line is used.

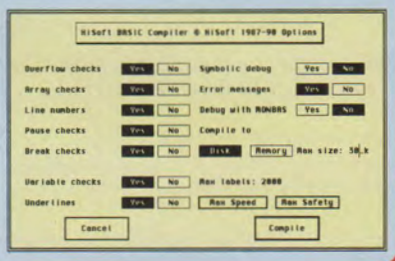
```
LISTING 3
'using the window info line

SUB DisplayText(VAL x,VAL y,val w,VAL h)
SHARED txt$(),cellw,cellh,text_counter,fi$
STATIC lines_per_page,i
lines_per_page=h\cellh
FOR i=1 TO lines_per_page
  v_gtext x,y+cellh*i,txt$(i-1+text_counter)
NEXT i
WINDOW NAME 1,,fi$+"  Line:"+str$(text_counter+1)
END SUB
```

DRAG 'N' DROP

If you have TOS 2.06 or later you can add drag and drop support to your program. This also works with most alternative desktops like *TeraDesk* or *Ease*. BASIC has a built-in command to check if any file was dragged and dropped onto the application. *COMMAND$* returns the file name or a null string if no file was passed. The program should first check the command line: if it contains a file name, it should skip the file selector bit. The code to do this is shown below. You can try to drag files onto the program by compiling the file *TUT35.BAS* to disk and placing its icon on the desktop.

```
fi$=COMMAND$
IF fi$="" THEN
  fi$=FNFileSelect$        'display file selector
END IF
IF fi$="" THEN SYSTEM      'no file was selected so quit
```



The COMMAND$ statement only works if the program is started from the desktop. Set the compiler options to compile the program to disk if you want to try this feature.

MISSED THE FEBRUARY ISSUE COVER DISK WITH K-RESOURCE?

No problem – just turn to page 98 for information on how to order back issues.

BACK TO BASICS

Taking a break from the depths of the ANSI C library, Jon Ellis explores the arithmetical side...

POWER MAD

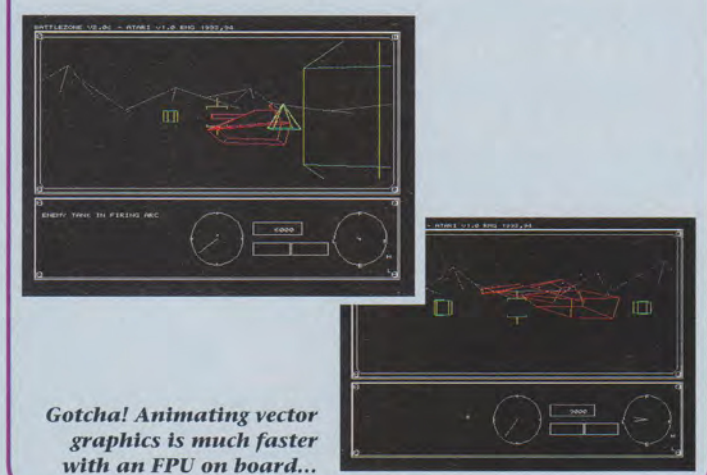
One of the disadvantages of floating point arithmetic is that it is slow. Whereas simple addition of two integers probably compiles to a single machine code instruction, floating point addition is much more complex, and in most cases is done by a special library routine that lives in the maths library. As a result, if you want to do a lot of floating point maths quickly, as you might in a game such as *CyberZone*, you need a little help.

Help can come in the form of a hardware add-on: the 68881 or 68882 maths coprocessor, commonly called a Floating Point Unit or FPU for short. The TT has one as standard; Falcons, MegaSTs and MegaSTes have sockets into which one can be fitted. What the coprocessor does is to provide extra machine code instructions to perform floating point operations. It not only covers addition, subtraction, division and multiplication, but also logarithm and trigonometric functions. Doing maths this way is *much* quicker than using library routines.

Having the silicon in your machine is only half the battle: it needs to be used. The good news is that no changes are likely to be necessary to the C source itself. It is simply a matter of recompiling and linking with a maths library that understands about maths coprocessors. There is a slight complication here, in that the chip is accessed in different ways on different computers. Megas and MegaSTes treat the FPU as a peripheral, rather like the blitter or sound chip. In the Falcon and TT, which have the more advanced 68030 at their hearts, the maths chip has a much more intimate (and quicker) relationship with the microprocessor. Two modes of access: two libraries.

Unfortunately, coprocessor maths libraries never formed part of the standard *Prospero C* package, and so were not included on the *ST Review* cover disk. They were available, though, as an optional extra so if this is your cup of tea, have a look through the small ads. *Lattice C* provides a variety of coprocessor libraries in the standard package, including a smart one that can automatically detect which flavour of coprocessor (if any) is available, and act accordingly.

This leads nicely on to the final point: compatibility. Programs compiled for use with a maths coprocessor will not work on a machine without one. One solution is to compile with something like the Lattice auto-detecting library. Alternatively, different versions of a program can be provided for use with different machines: say a no-coprocessor version for normal machines, and a 68030/coprocessor version for TTs and Falcons with FPUs.



Gotcha! Animating vector graphics is much faster with an FPU on board...

The language of C provides a range of mathematical operators that allow you to do simple arithmetic. Addition, subtraction, multiplication and division are supported directly. More exotic maths operations like logarithms, sines and cosines are provided by library functions.

The basic operations are performed exactly as you would expect, and indeed we have met many of these along the way already. For instance:

```
total = subtotal + VAT;
total = amount - discount;
total = number_of_items *
        price;
share = profit / partners;
```

are reasonable examples of the four principle kinds of arithmetical functions.

Most arithmetic in C is performed on **integer** variables. These are the type of numeric variable that we have come across already, and can only contain whole numbers. When such variables are divided, any fractional part of the answer is thrown away, to give an integer result. To begin with, some of the effects of this type of operation may seem surprising. For example, the statement:

```
quotient = 34 / 6;
```

assigns the answer 5 to "quotient", even though the actual answer is closer to 6 (5.67).

C provides a way for you to get at the information that gets discarded from the division. This is done by using a fifth arithmetic operator, the **modulus** operator, which is written as "%":

```
result = number1 % number2;
```

sets "result" to the remainder when number1 is divided by number2. In the example above, we could write:

```
remainder = 34 % 6;
```

which would yield the answer 4.

Putting these two parts together, we can recreate the original number:

```
quotient = 34 / 6;
remainder = 34 % 6;
original_number = quotient *
6 + remainder;
```

These properties of integer arithmetic may seem horribly restrictive and awkward to work with. However, the vast majority of programs need nothing more. The real advantage of integer arithmetic is its speed and simplicity of coding. C works out arithmetic expressions using the normal rules of maths that you were taught at school. Calculations in brackets are done first, followed by multiplication and division, and finally addition and subtraction.

All five basic operations can be written in a shorthand form when the result is being assigned back to the same variable involved in the calculation. Each of the following pairs is identical:

```
total = total + 5; total += 5;
total = total - 5; total -= 5;
total = total * 5; total *= 5;
total = total / 5; total /= 5;
total = total % 5; total %= 5;
```

These shorthand forms are known as **assignment operators**.

FLOATING POINT

Obviously, if you wanted to write a scientific program or a CAD package in C, the inability to handle fractions would be crippling. Such needs are catered for by C's **floating-point** support, which provides non-integer arithmetic along with the exotic maths functions mentioned above.

There are two new variable types for use with floating point numbers: **float** and **double**. The difference between them is analogous to the difference between int and long: the amount of memory devoted to storing the number. With floating-point numbers, more memory means not only can bigger numbers be handled, but also more decimal places of precision are available. In practice, float is hardly ever used because all of the floating point library functions convert floats to doubles before doing anything with them. In *Prospero C*, a float occupies 4 bytes and a double 8 bytes. Real ANSI C anoraks will no doubt be asking about the long double type: this rare beast is treated just the same as double.

To use floating-point maths in your programs, simply declare the appropriate variables as doubles and you're away. Addition, subtraction and the like are performed using exactly the same operators as for integers. The only differences are that the modulus operator cannot be

applied to floating point numbers and that division works as it does on a calculator – it doesn't throw fractional answers away! Assignment operators can be used with floating-point variables too.

Once compiled, programs must be linked with the full libraries (do not tick the "with small libraries" option on the link menu). Other C development systems have an independent maths library file: under *Prospero* it is combined with the main C library. Declarations for the ANSI C maths library functions are in *math.h*, which should be **#included** if logs or trig functions are needed. Another header file, *float.h*, contains rarely-used symbol definitions for limits such as the maximum number storable in a float.

Floating point constants can be written in two forms. For example, to assign 3000 to a floating point variable, either of the following could be used:

```
float_var = 3000.0;
/*Normal notation*/
float_var = 3.0e3;
/*Scientific notation*/
```

Note the use of a decimal point in the first form to differentiate a floating point constant from the integer constant 3000.

For printing out floating-point numbers, **printf()** supplies three conversion specifiers: **%f**, **%e** and **%g**. **%f** prints a number as a straightforward decimal (154.36); **%e** prints in scientific format (1.5436e2); **%g** prints in one format or the other, depending on the size of the number. The number of digits of precision can also be controlled: **%2.4f** prints a number with two digits before the decimal point, and four after. For more information, see the *Prospero* library documentation.

FINAL WORD

Finally, an example program. No discussion of C floating-point arithmetic would be complete without it: the traditional Centigrade to Fahrenheit conversion program. The source code is on the cover disk as *CENTFAHR.C*, and it even includes negative values for these cold winter days! In the next tutorial, we will look at the subject of errors: how are they caused and how do you fix them...

ANSI MATHS FUNCTIONS

To access these functions, **#include** <math.h> and link with full size libraries, not small libraries. Unless otherwise specified, all arguments and return values have the double type. For trig functions, all angles are in radians.

Function	Purpose
acos(x);	Returns arc cosine of x
asin(x);	Returns arc sine of x
atan(x);	Returns arc tangent of x
atan2(y,x);	Returns arc tangent of (y/x)
cos(x);	Returns cosine of x
sin(x);	Returns sine of x
tan(x);	Returns tangent of x
cosh(x);	Returns hyperbolic cosine of x
sinh(x);	Returns hyperbolic sine of x
tanh(x);	Returns hyperbolic tan of x
exp(x);	Returns e to the power x
ldexp(x,int exp);	Returns x multiplied by 2 to the power exp
log(x);	Returns natural log of x
log10(x);	Returns log of x
modf(value,double *iptr);	Break up value into integer and fractional parts. Integral part goes into *iptr (as a double) and fractional part is returned.
pow(x,y);	Returns x to the power y
sqrt(x);	Returns square root of x
ceil(x);	Returns smallest integer not less than x
fabs(x);	Returns absolute value of x
floor(x);	Returns largest integer not greater than x
fmod(x,y);	Returns fractional part of quotient (x/y)

TOP TIPS

Four top tips on using floating point maths in your programs:

● Don't use floating-point maths unless you really have to – it is slow and makes your program bigger.

● Be careful when comparing floating point numbers. The nature of the floating point representation requires that calculation results are rounded up or down to fit into variables. This creates tiny errors that may prevent tests for equality between two numbers succeeding. If "bananas" has the value 3.000001 due to a rounding error, the test:

```
if (bananas == 3.0)
  {
  do_something();
  }
```

will fail. Bullet proof your code by using something like:

```
if (fabs(bananas-3.0) < ROUNDING_ERROR)
  {
  do_something();
  }
```

fabs() is a library function that returns the absolute value of a floating point number. #define **ROUNDING_ERROR to be the sort of difference between two numbers that you are prepared to ignore: say 0.0001.**

● Explicit interconversion between integer and floating-point numbers is possible using typecasts. Integer to floating-point is easy:

```
float_var = (double)int_var;
```

The other direction is more awkward, and is full of possible pitfalls. The simplest conversion is:

```
int_var = (int)float_var;
```

This takes the integer part of float_var without regard to the fractional part. As a result, 5.9 will be converted to 5. A more natural rounding up of float_var can be obtained with:

```
int_var = (int)(float_var + 0.5);
```

In either case, the problem is range. Only convert to integers in this way if you are sure that the integer part of a floating-point value will fit into the integer variable. If not, be prepared for some strange answers!

● Mixing floating point and integer data together in the same expression is acceptable. If there is any floating-point element in an expression, all the other elements are implicitly converted to floating point before use, and the expression result will also be a floating point number.

SEPTEMBER '93 ISSUE IS SOLD OUT...

... but we still have some of the cover disks! If you missed out on *Prospero C* and would like a copy of the cover disk along with a laser copy of the first tutorial, send £2.50 (payable to IDG Media) to: *Prospero C Disk, ST Review*, Media House, Adlington Park, Macclesfield SK10 4NP.

FLAME THROWERS

INTO THE

As with most things in life, there's a right way and a wrong way to behave on BBSs. Graeme Rutt and Mark Baines check out the etiquette...

All social systems require a certain *modus operandi* and comms is no different. Without a knowledge of what is right and wrong, it's possible for the modem novitiate to make a fool of themselves, making the old hands very angry and putting a black mark against their *name* which may take a long while to clean off!

FIRST STEPS

The first thing to remember is that each system and each message base and conference is going to be different. Each will have its own set of rules (usually unwritten), its own language conventions and in-jokes.

Take some time when you join a conference to read the previous messages. Try to taste the flavour of the area and get to know some of the (inevitable) personalities. Note the conventions used in terms of things such as the size of signature, amount of quoting, allowable language and so on. Don't introduce yourself by complaining about some aspect of the system or conference. In particular, don't take offence at anything anyone says *until you understand what's going on*. For example, if you see Sabbath calling Juppy a "git" in open conference, you are probably seeing two friends indulging in idle banter. Text communication is always problematical.

When the time comes for your first message, do *not* be scared of looking like an idjit. Ask away, read any answers and don't be worried about following up if there's anything you don't understand. It really annoys me when people are pounced upon merely because they ask a question. If this happens to you, don't be worried – just remember in future that the guy who moaned is a bit of a moron.

SMILEYS

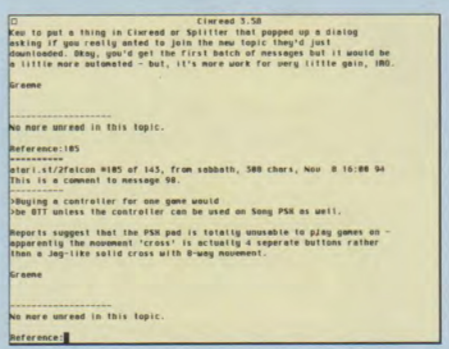
The smiley is a good way of showing the emotion underlying any piece of text. It is put at the end of a clause or sentence and is usually linked with just that section of text. If it's put at the end of a paragraph or whole message (on a blank line) it's often a more general statement.

Smileys are made up of various punctuation characters and are supposed to make a face. To see them correctly, lean your head to the left.

Here's a list of some of the more common offerings:

(;>	a wink – don't take this *too* seriously
(:>))	a smile – I'm happy!
(:-((	an unhappy smiley – I'm miserable
>:-((	a frown – something's made me angry

There are books devoted to this kind of thing. I prefer to use "boxed emotes", such as [g] for grin and [s] for smile.



My standard CIX sig is just my name. No more is required as the message header has all other important points.

DEALING WITH PROBLEMS

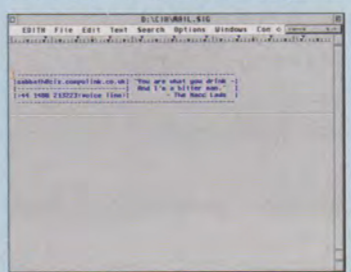
Talking of morons, whatever you do, whatever you say, wherever you say it – you will *always* come across them. They are on all systems but seem to infest some more than others. For instance, the Atari areas on CIX have few and the Atari areas on the Usenet have many. Whether this is due to the paucity of American high school students on one and their abundance on another, I'll leave it for you to judge.

In general, you can split any moronic message into two categories: flame-bait and flames (see the Jargon Jogger). Further more you can split those that you see into those aimed directly at you and those that are not.

If you're new to a system then do your best to ignore those that are not: you haven't earnt your spurs yet and crashing in like a knight in shining armour won't win you any medals. If a flame is aimed your way, the first question to ask yourself is, "did I ask for it?".

One school of thought suggests that *no* flame is justified, but I fear that these folk are wearing rose-tinted eye glasses. If you say something that is stupid or inadvertently offensive you may well get flamed. If I screw up and get flamed I tend to apologise for the original error and tell the flamer that he could have just pointed out my error – the abuse wasn't necessary.

When I am flamed for no justifiable reason, things are a little different. I feel a certain freedom to fight back. A flame can be a rich and diverse method of expressing yourself. There is no reason to be curt and vulgar. In fact, there is far more pleasure to be gained by using your wit, your knowledge of the adversary and a sense of fun. Turning a flame war into a gentle battle of wits can defuse the situation and help keep a system or conference healthy.



My e-mail sig contains everything that someone may need to contact me – it would also contain my fax number if it was working, along with a little personal song lyric...

INJECT SOME HUMOUR

I've coined a phrase that sums up the biggest problem with comms; *the barren text wasteland*. In the wasteland there are no smiles, no grins, no raised eyebrows or exasperated sighs. There is only barren text and when you're dealing with text, you have no inflection and no body language. It is all too easy to misunderstand an innocuous comment and find it an entirely offensive message.

There is no real solution to this. The only advice I can give you is to read what someone says very well, to bear in mind their personality (if known) and to give *everyone* the benefit of the doubt. There are some ways of making the wasteland a little less barren; text bounded by *asterisks* means emphasis while smileys (see boxout) can point out jokes or satire.

JARGON JOGGER

sig: signature, usually included automatically with any message. A small sign-off that contains contact info or song lyrics (usually).

quoting: repeating sections of the message you're replying to. Quoted sections usually start with the > character.

Juppy: a strange, lovable creature who infests the CIX conference from time to time!

Usenet: a network, now linked to the *Internet*, that carries newsgroups (open discussion forums)

flame: an irate message, moan or slagging, often vulgar in content

flame-bait: a message that has been written for the express purpose of generating flames.

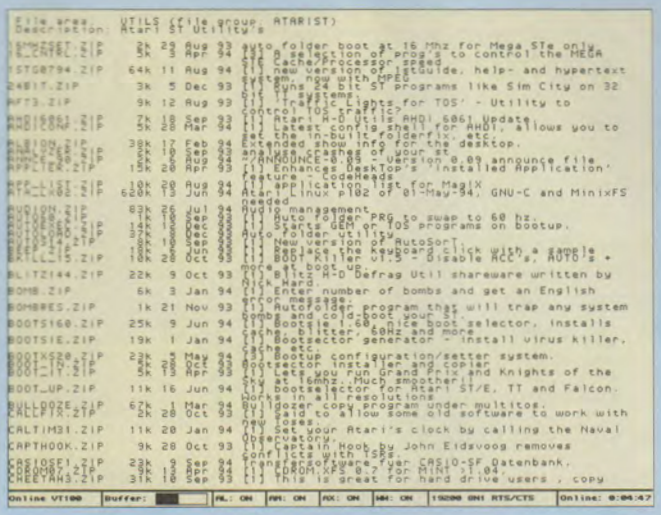
flame-war: an all-in fight between two (or more) factions.

NETIQUETTE FOR NEWBIES!

'NET

Comms is about trust, respect for others in the on-line community and, above all, co-operation. On the whole, there are very few rules or laws governing comms, whether on a single, private BBS or the *Internet*.

There are, however, some "rules" of etiquette, things you are encouraged to do to help yourself and others receiving your messages and mail. Depending on where you are posting, these rules can be strictly enforced by the sysop or moderator, or more usually by the other users in the conference or newsgroup. When this happens you soon know about it!



The Fortress BBS file list – gimme, gimme, gimme, snuffle, snort...

BEHAVIOUR

Read any system messages from the sysop or system administrators and act on them immediately. Don't start bothering people with "how do I... ?" questions until you have thoroughly read these and any help files. This is the most frequent complaint I hear from sysops.

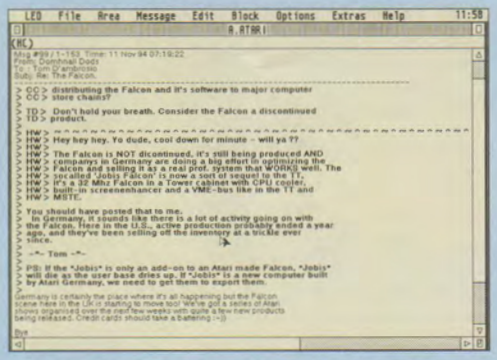
Remember that you are a guest on any system you use. Even if you pay a subscription, access to that system isn't your right. Politeness when trying to sort out problems gets results far quicker. BBS systems might be free but the sysop has spent many hundreds of pounds for your convenience. Respect that and let the sysop know his efforts are appreciated.

When logging off or quitting a *telnet* or *ftp* session, use the proper commands and procedures. Don't just switch off the modem! The remote system may take some time to notice that you have gone and this will block the line for other callers. It may cause other, more serious, problems.

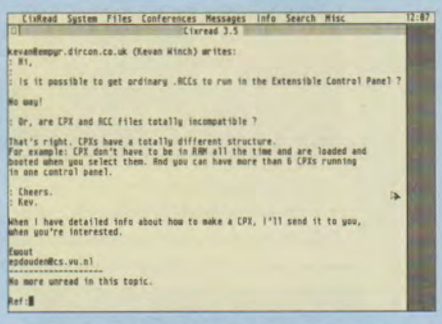
Don't call up the sysop for a chat unless you have something to ask that can't wait for a private mail response. Sysops and sysadmins are busy people but most are willing to help. If they see you in trouble, they might come on-line to talk to you. In a two-way live chat, the standard way to hand over the conversation is to press the <Return> key twice. When you see two blank lines, then it's your turn.

Use your real name unless anonymity is essential – it's more friendly and courteous. Don't hide behind a pseudonym – take full responsibility for your own actions and words. An increasing number of bulletin boards don't allow handles.

Don't trough a BBS, that is, log on, download all the files and disappear without even a thank you. BBS systems are primarily public chat systems – files nearly always come second. However, troughing public sites set up for the purpose, such as through *anonymous ftp*, is OK.



Bad quoting style – three levels of quoting, four different people. Learn to use the editor or get an off-line reader...



... Intelligent quoting – splitting up the quotes into individual parts helps readability.

MESSAGES

Don't leave test messages in public conferences that get distributed around the world. Use the special conferences or newsgroups set up for the purpose.

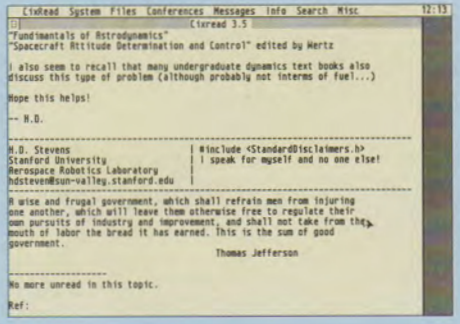
In all messages use the *Subject:* line. If a conversation changes with time, then change the Subject line to match. Also, when replying to messages keep the amount of quotation brief, just enough to remind the reader what you are referring to. It is unforgivable to quote the whole of a message adding only a sentence of your own. Conversely, don't send a message or e-mail that contains *no* hint as to what you are commenting on. Nothing is more frustrating than an e-mail that just says "Yes OK"!

No slander, libel, vulgarity, abusive language and threats. Is your style of language and tone appropriate? Use smileys to emphasise your expression if necessary, but remember you can't hide behind one. If what you say is offensive, a smiley doesn't make it less so! Be clear, concise and to the point. Spelling and grammar is important: we all make mistakes but a sloppily presented message is likely to get ignored. Remember, the reader has hundreds of others to wade through. Above all keep on topic. If you are in an Atari newsgroup, don't start talking about politics or religion! Read a new newsgroup for a couple of weeks before jumping in. Take your time to learn who's who and the experience of others. Reading the FAQ file before asking questions is essential.

Take flames and acrimonious arguments to e-mail. Nobody is interested in hearing you have the last word!

Cross-posting, that is sending the same message to multiple newsgroups, is frowned upon. Choose the appropriate place to post your message. Finally, don't advertise in conferences and newsgroups unless specifically set up for that purpose. This will definitely get you into deep trouble.

Usenet and e-mail signatures on the *Internet* should have a separator of two "-" characters and be no longer than four lines. Don't include ASCII graphics: you might think it awfully clever and inventive but it just adds to the system load and serves no purpose...



Argh! Those Usenet signature files again! Might be useful in soc.politics but in sci.space.tech?!

Sysop: Systems operator – someone who runs a BBS system.

Sysadmin: System administrator – someone who runs a network.

Newsgroup: a *Usenet* conference containing public messages on a particular topic.

Handle: a pseudonym or false name.

Moderator: someone who has the last word on the style and content of a newsgroup or conference.

FAQ: Frequently Asked Questions – a list of FAQ and their answers.

Trough: as in pig trough!

Flames: unpleasant and often pointless arguments.

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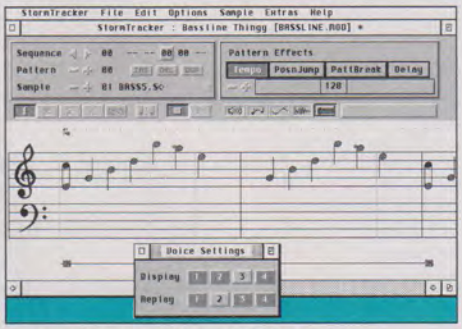

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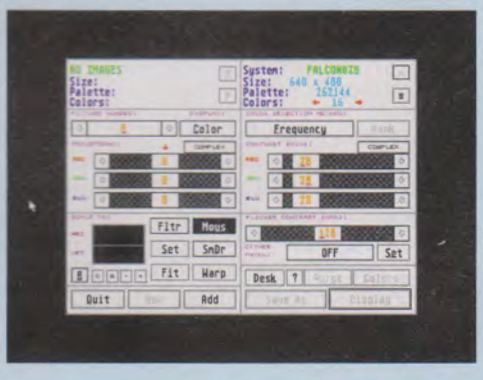
Answers to your questions – from a team that knows its onions...



Super view – Speed of Light allows you to see GIF files, and plenty more besides!

IN A GIFFY

A colleague of mine has an Amiga (spit) 4000 with several graphics and art packages that load GIF format pics. I have a file converter plus a couple of programs that work with GIFs. The problem? Even after taking the precaution of using disks formatted on my beloved Atari, I was unable to read them. In fact the system reacted as if unformatted disks were being used. I have been told that what I really need is a GIF Viewer. Is this so and, if it is, where can I get one from? Will this solve my problem?

Keith Hickson

If the disks are unreadable on your ST then something is obviously going wrong during the transfer stage. All modern Amigas can deal with DOS disks happily, but it's just possible that the 4000 is having more trouble with the Atari format. Assuming your ST has a double-sided disk drive, I suggest that you format some true DOS floppies with FastCopy 3 (or similar). Your colleague will be able to copy directly to these disks (via CrossDOS) and they should then be readable on the ST.

As for actually viewing the pictures, you are spoilt for choice. My personal recommendation is Speed of Light, which makes a good job of displaying colourful GIFs on an ST. It's available from most PD libraries and was also featured on our last cover disk.

Nial Grimes

AUTO RUNNING

In *Beat The System* in the March 1994 issue of *ST Review*, I saw a reference to making up boot disks, which had been in a previous issue, presumably January or February. This is an area in which I have had no success, despite trying to make up a boot disk for *WordWriter* using an Auto folder. I have a 520STFM, with TOS 1.04. I did manage to make it load automatically by using the *Install Application* facility, as described in the article. Can you help?

Daniel Connochan, East Lothian

We covered making a boot disk in the February 1994 issue of ST Review. Your letter reads as though you have tried to put your WordWriter program inside the Auto folder. This will only work with programs that are designed to be run in this way – and this generally does not include word processors.

What you have to do is make a copy of your WordWriter working disk and then add all the desk accessories you normally use to the root directory (in other words loose, not in a folder). Next, create a folder called AUTO and copy your Auto folder programs into it. This includes things like a replacement file selector and perhaps MACCEL, the Atari mouse accelerator – the list is endless and everyone has their favourites. This doesn't include anything from the WordWriter disk. If you don't have room, try deleting some of the unwanted printer files (with a .CFG extender).

Now reset your ST with the new boot disk in the drive and when the desktop appears, arrange it the way you want it in medium resolution. Now highlight the program file (usually WW_UK.PRG) and go to the Options menu to select Install Applications. Click on the Auto button and then the Install button. Now save the desktop (select Save Desktop from the Options menu). Next time you start up with your word processor boot disk, the program will be launched automatically.

Andrew Wright

PRO PROBLEMS

I installed *Easy Text Professional* from your cover disk and used it for a couple of hours quite successfully. The next day I simply couldn't get it to work. The problem appears to be related to *GDOS*, but I'm not sure what to do to solve it. I have an STe with 2Mb of RAM.

Paul Spence, Aberdeen

It seems that GDOS hasn't been loaded into your system at the point when Easy Text Professional starts up. The simple answer to this is to insert the program disk into your floppy drive and reset the machine. Easy Text Professional should now work.

As the computer reboots, you will notice that GDOS displays a short message on screen just before the desktop appears. GDOS is a program that is designed to run automatically whenever you reset your computer. It forms part of the Easy Text Professional package and is responsible for the

THE ORACLE

This month Nial Grimes takes centre stage to bring you five essential ST tips...

- A modem is one of the very best things you can add to an ST system. For around six quid a month (the CIX subscription fee) you can chat with dozens of like-minded ST fans, join discussions about cult TV shows and even bid for some bargains in the auction conference. 2400bps modems are fine for conferencing and can be bought for well under £100 these days. Opt for a speedier device and you can begin to think about grabbing some PD or shareware.

- One of the best ways to learn about the ST is to program it. Structured languages such as *HiSoft BASIC* or *GFA BASIC* really aren't that difficult to grasp and the satisfaction you can get from hand-weaving your very own program is immense.

- If you are a games player, a cruise of the local car boot sales is well recommended. *Overlander*, *Super Hang-On*, *Xenon 2*, *Nebulus* and *IK+* may be a bit long in the tooth, but they still kick butt in terms of playability and can often be picked up for a song. But don't buy *Interphase* – it will take over your life!

- Get hold of a good shareware catalogue. Simple utilities such as *MonSTEr* and *FPrint* can revolutionise a desktop publishing set-up, and that's just a tiny example of the quality software that the public domain has to offer. Goodness knows where we'd be without *Superboot*, *GEMView*, *Idealist* and the rest of the gang.

- Consider your upgrade path carefully. We'd all love Falcons with 14Mb of memory and a 4 gig hard disk, but in the real world it's a case of choosing the *right* upgrade for your money. If you are using *Calamus 1.09n*, extra memory and the display speed offered by *NVDI* are going to be a real boon. *Timeworks* users, on the other hand, will probably find a hard disk more beneficial.

Golden Oldie – Xenon 2 offers great gameplay and can be picked up for a song...

Strike one – GDOS raises its ugly head yet again...

display and printout of fonts. If you look closely you will see that there is a folder called "Auto" on the program disk with GDOS.PRG inside it. There are several files on the disk that GDOS needs, among them being the ASSIGN.SYS files and the various screen fonts.
Mike Robinson

NO JOYSTICK

My STFM (upgraded to 1Mb) had a faulty mouse port but this has now been moved to the back and works perfectly.

But my ST no longer accepts two joysticks – to play games with two players the joystick has to be shared. Could it be because I have a Joystick and a Joypad?
Les Bassnett, North Liverpool

It's a bit difficult to pinpoint the problem from your description, but I'll do my best to run through the possibilities. Firstly, is the joypad you are trying to use compatible with the ST? If so, have you tried swapping the cables to rule out a problem with the joysticks?

From what you say, the most likely cause is that the engineer has somehow disabled or disconnected some circuitry while hacking about with the mouse port. If the symptoms did indeed occur when the socket was first moved, I should give the repair company a call and place the ball in their court... **David Nilson**

MORE ACCESSORIES

I have a big collection of desk accessories, all of which I use regularly. The problem is that the limit of six loaded at one time means I have to keep renaming them from .ACC to .ACX and rebooting to get the ones I want loaded up at any one time.

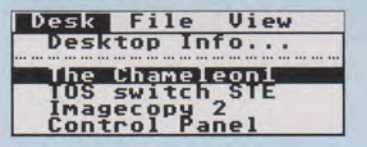
Is there any way around the six accessory limit or am I stuck with it? I have a hard disk so there is no problem with disk space, just the measly limit.
Daniel Brown, Newcastle

There are several ways around the six accessory limit. The cheapest option is a program called Chameleon, available from most PD libraries. Chameleon is a desk accessory that gives you access to your other accessories.

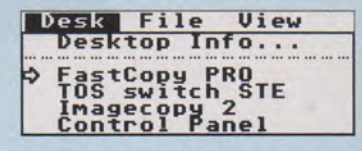
You can put them all in a sub-directory and load them as required via Chameleon. There are also commercial programs, such as Multidesk and Multidesk Deluxe, that do the same thing.

Another option is Atari's own MultiTOS. This allows you to run accessories just like any other program. You can also run several applications at the same time. Contact HiSoft on 01525 718181 for more details.

Finally, Geneva, the operating system replacement from the NeoDesk people, allows you to load and unload accessories as required with the only limit being free memory. Geneva is available from Compo on 0487 773582.
Iain Laskey



Changeable – Chameleon looks just like any other desk accessory...



... except that it can be used to load any accessory of your choosing.

PRINTER PROBLEMS

TWO PORTS

I picked up an old Epson dot-matrix printer at a car boot fair and, having got it home, I discovered it only has a connector for serial cables. Is there a converter I can buy to use it with my Atari or have I bought a turkey?
Tony Phillips, Tonbridge

Good news! The ST has a standard serial port which, while normally used for attaching a modem, can be used just as easily with a printer.

Connect the printer to your ST with a standard serial printer lead. If you haven't already got one, your local computer shop should be able to supply you with a suitable cable. Before it will work properly though, you need to set the port up. This is done via the control panel.

If you received a manual with the printer (fat chance... Ed), you can look up the correct settings. Common ones are 9600 baud, Even parity, 8 data bits and 1 stop bit. Enter these values into the Modem CPX. Finally, set up the printer CPX to tell the ST to use the serial port instead of the standard parallel one. If you get any problems, try experimenting with different baud rates, parity settings and stop bits. You may also need to adjust the flow control.

As the printer is an Epson, you should find most ST software will work fine with it using an Epson FX printer driver. **Iain Laskey**

GONE BUT NOT FORGOTTEN

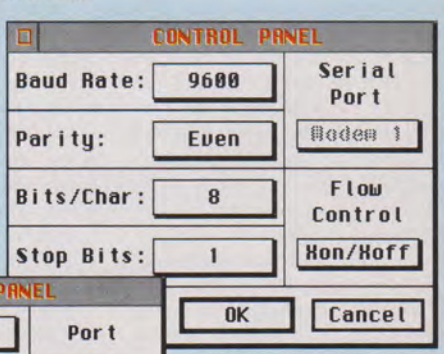
I have just been given an Epson RX-100 but with no leads. Could you tell me if it is possible to connect it to an Atari STe? If so, what lead do I require and do I have to change DIP switches 1 and 2 in the manual?
Mark Hallson, Manchester

The RX-100 is a wide carriage version of the RX-80, a nine-pin dot matrix printer that is no longer made. However, it uses the standard Epson "Esc P" control codes so you should have no difficulty in getting it to work providing you choose an Epson nine-pin driver such as the RX-80, FX-80 or similar.

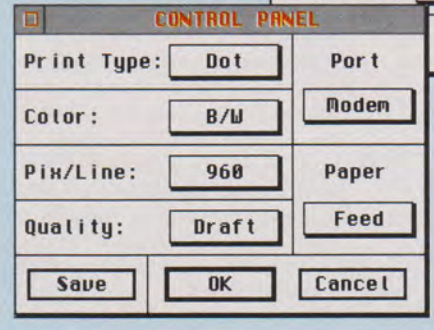
There is a parallel port on the back so you need an ordinary computer printer cable with a Centronics plug on one end and a 25-pin "D" connector on the other. This is more or less standard across all computer platforms (apart from the Mac) so you should be able to buy one in any good computer shop. There are two banks of DIP switches, which I think is what you refer to in your letter. The first bank has eight switches and the second has four. The normal switch settings are as follows:

Bank 1
Switch 1: Off (On = condensed print)
Switch 2: Off (On = graphics mode)
Switch 3: Off (On = buzzer off)
Switch 4: Off (On = 12 inch form length)
Switch 5: Off (On = turn off paper end detection)
Switch 6: On (UK character set)
Switch 7: Off (UK character set)
Switch 8: Off (UK character set)

Bank 2
Switch 1: On = Zero character
Switch 2: On = Auto Feed Fixed
Switch 3: On = No line feed, Off = LF and carriage return
Switch 4: On = Skip over perforation
Andrew Wright



Serial set-up – use the Modem CPX to set the speed and characteristics of the serial port...



... and then select "serial" instead of "parallel" via the Printer CPX.

IN TUNE

I would like to know if I can measure the pitch of a sound in hertz with a high degree of accuracy via a microphone with my Falcon 030. I am thinking about the possibility of tuning my piano by using the computer to adjust the pitch. Is there any software that I could use?
Emilio Darden, Spain

I haven't seen any software specifically designed to do this, but it is entirely possible for such a program to be written. A similar function is indeed available within DigiTape, the direct-to-disk program, but it's hardly worth going to such an expense just for tuning a piano!

Perhaps there's a programmer out there with some knowledge of this subject – it would certainly make a nice shareware program... **Ofir Gal**

FONT WORKS

Is it possible to replace the fonts supplied with *Timeworks* with fonts of my choice? I have tried creating a Gemsys folder with the new fonts inside, and substituting the new names in the *ASSIGN.SYS* file, but the program refuses to read them. They all have a .FNT extension like the originals so what am I doing wrong?
Dave Parton, Shropshire

It is possible to change the fonts used by Timeworks, but as with all things involving GDOS, it's three parts luck and one part black magic! Might I suggest that you leave the original fonts in place for a while and just add to the existing set-up. The procedure is as follows...

GDOS fonts are actually made up of two files (one for the screen plus another for the printer) and the first step is to copy both to the existing GEMSYS folder. Now open ASSIGN.SYS with a text editor and add the filenames to the appropriate lists. If you fancy an easy life, use the Assign Ed program to carry out this step; it was included on cover disk 31. Now you simply need to tell Timeworks about the new set-up, so reboot to install GDOS and then run the Fontwidth program. With any luck, the new font will now be available and you can worry about adding a few more.

One final point is that the fonts must be in the right format. If you suspect that this is a problem, give FaST Club a call – it supplies an extensive range of public domain GDOS fonts at various different resolutions. Good luck, and may the force be with you! **Nial Grimes**

POOR TRACING

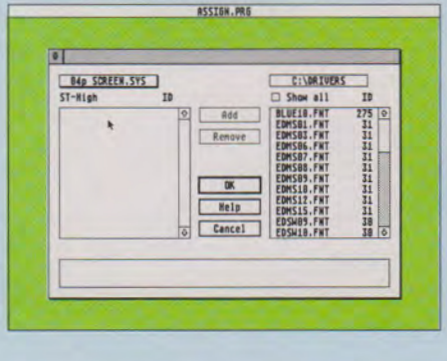
Why doesn't somebody do a raytracer like *Real 3D* or *Vista* for the ST and Falcon? I have done several pictures using *Real 3D* and I find it a lot easier to use than *POV*, *DKB* and the like. *Real 3D* is also faster than *POV* – and you can't say that it's the machine as the Amiga runs slightly slower than an ST. Also, you can't say that it's because the ST can only show 16 colours on screen, because a picture saved as a Targa file can easily be displayed via *Photochrome*.

Xenomorf would be nice if it could handle complex objects and was not written in C, which makes it slow even on a Falcon with an accelerator and a maths co-processor!

Is it true that there's a really excellent, fast Raytracer available for the ST in Germany and if so, why doesn't somebody release it over here?
Noel Wallace, Scotland

You've got me there. For some reason, the Amiga does seem to boast a better range of raytracers than the ST. I agree, Persistence of Vision is a bit anorexic in the interface department, but if speed is the main problem, try version 2 – it's quite a bit faster than its predecessor.

If you've got a Falcon, you'll be interested to learn that InShape 2 will be available before too long. This might be the "German package" you are referring to and if the first version is anything to go by, should be well worth looking out for. **David Nilson**



Simple system – Assign Ed takes the stress out of changing ASSIGN.SYS files.

READERS' HINTS

Win a tenner the easy way – send a tip to ST Review!

CALAMUS TRICKS

If you own *Calamus 1.09n* and have a Citizen ProJet printer, you're probably using either the LaserJet II printer driver or a public domain DeskJet driver. Either way, the program spits out two blank pages for every one that it prints, and has problems printing the margins in the right places.

The solution? Invest in a copy of the *Calamus S* demo from the FaST Club (disk WP.801). Install it and look for the folder called "drucker". This is full of .CDT files, the *Calamus S* printer drivers. Take HP_DJ.CDT, copy it to your 1.09n system folder and rename it to PROJET.CPD. Load *Calamus 1.09n*, choose this as your new printer and save the settings.

Other drivers in the *Calamus S* demo include the BJ10, LaserJet II and III and the Epson LQ. The same trick will probably work with these as well: just change the extender to .CPD.

Another common problem is when the last line or two on a page print onto the next sheet. This means that your physical page size is incorrect and can be cured in one of two ways. You can rotate all of the text on the page by 180°, so turning your page upside down and printing the bottom of the page to the top of the sheet, or, alternatively, read your printer's manual! Check what the printable page area is for your particular printer and draw guidelines for these on a blank *Calamus* page. Save as BLANK_A4.CDK and use this as a template for all of your work.
Peter Dean, Norfolk

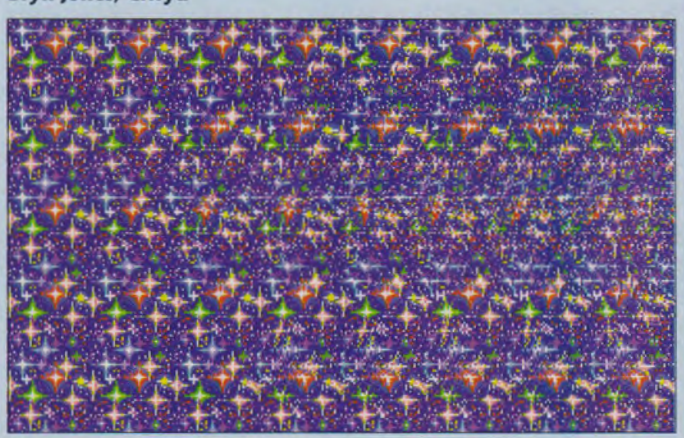
Model citizen – yes, there is a way to print correctly from Calamus 1.09n on a ProJet...

IN STEREO

I have some useful tips for *ST Review*'s *StereoCAD* demo.

- If you draw pictures as shown in the demo pics (that is, with a black background) the picture appears inside out and subsequently distorted. To correct this, move the layer selector right to the bottom of the layer (the pinkish one) and paint the whole screen with it. Now if you want to create sticking-out objects, go back through the layers – the further you go, the more the object sticks out.
- When you make the background, save it. This will save you the hassle of drawing one each time you load the program.
- Load your final picture into an art package and change the colour palette as this adds more individuality to your creations.
- Save regularly! There's nothing worse than making a fatal mistake on your masterpiece and having to start all over again!

Bryn Jones, Clwyd



See here – it's a tree, it's a tree – I think...

LETTERS

Your final chance to speak to Vic Lennard, the editor of the about to be deceased ST Review...

THANKS FOR TAKING THE TIME...

... to write in to me at *ST Review*. Since moving to Europress some 23 issues ago, I've received well over 1,000 letters and questions for *Ask The Experts*. That's an awful lot of creative thinking and time spent on your part helping this magazine and I appreciate all of your support.

I'm only sad that the demise of *ST Review* means that you will no longer get the necessary help and assistance from a magazine that cares passionately about the computer you enjoy using.

All the best for the future.

V. Lennard

PC-FREE ZONE

I quite agree with Ofir's observation of how even the music industry has been penetrated by the mindless money-spinning PC suits, with their attitude of "We don't know what it is but you definitely need one of these because it has all these fancy add-ons...". They've already destroyed personal computing as we know it – the hype has drawn in many people who now think they know all about computers simply because they have the latest Intel slab on their desk, and yet not one of the morons who I know personally can program or even set up their machine from the box!

Only last week I visited Silica's store in Debenhams, Manchester, with a view to trying out some direct to disk software for the Falcon. The salesperson told me that this was not possible firstly because somebody had bought the display model (?!), and secondly because it wouldn't run anything, having only 1Mb of RAM and no hard disk. This is pretty disgusting. However, the real music stores tend to be run by real enthusiasts (in other words, musicians) who in most cases will still sell you an Atari because they know that's the best machine for their customers. They care.

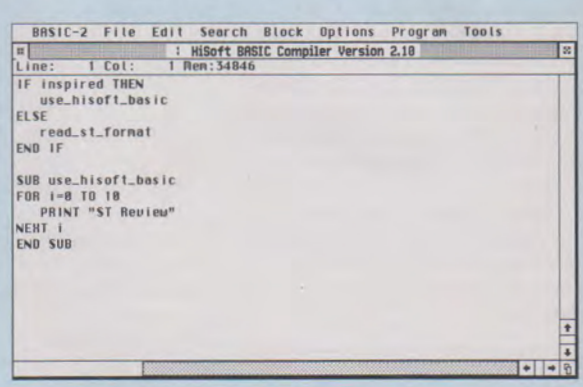
S. Lai, via CIX

When Silica opened its "Silica Store" in Debenhams, London, I had high hopes that this would lead to a substantial Atari presence in the High Street. I have to stand corrected on that, having received many letters of complaint concerning the lack of Atari support at any of the Silica Stores around the country.

Unfortunately, the simple fact is that there are few stocks left of Atari computers. As far as I am aware, no computers have been manufactured for some time, hence our news story a couple of issues back telling you to go out and buy one for Christmas. You possibly won't find one afterwards!

Even so, there is no excuse for uneducated staff – if a shop has a Falcon, surely it isn't unreasonable to expect someone to know how to use it! If you go to a specialist like System Solutions, you know that the staff will be courteous and knowledgeable – Rob and Gordon use Atari machines for a living. And yes, you may have to pay a little more than from a box shifter but that little extra buys you a security that is worth far more than your saving. Let's put it this way: when I wanted to buy a 17" monitor for my Falcon, I'll give you one guess where I went...

Big first – HiSoft BASIC appeared on issue 4 of ST Review, the first of many major programs to do so...



DIAMOND DISKS

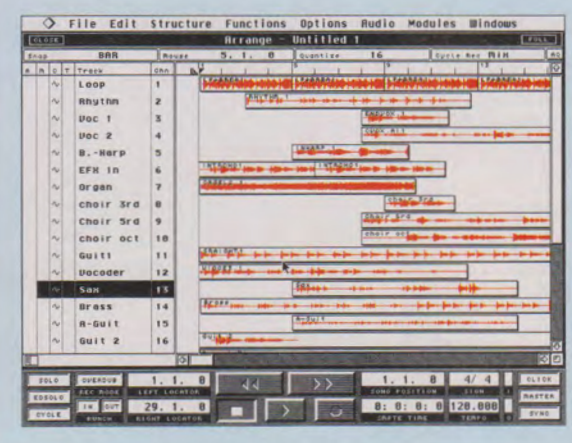
Though I have to watch my pennies since being forced to retire due to ill health, I have ordered your magazine from my newsagent every month. I bought my computer, a humble 520 STe, to give me something to do now that I am nearly, house-bound. I wanted to learn how to program. I invested in a copy of your *HiSoft BASIC* to go along with the *First BASIC* program that came along with the computer. Whether it is my age I do not know, but I was finding it very difficult to get to grips with all these strange new words – until Issue 23 came along with the cover disk containing *K-Resource* and Ofir Gal's tuition on working with BASIC.

That one program, and Ofir's great tuition, more than pays for the price of your magazine. How can anyone complain about the quality of your cover disks when they contain programs of this calibre is beyond me. They must have no sense of appreciation – whatever you do, you will never be able to please them.

I am not saying that I am now an expert with BASIC because I am still struggling, but Ofir's help has given me something to keep reading and trying. Sometime in the future I may understand, and be able to use, all the command words. Keep up your good work – and if some people do not appreciate your most excellent magazine, I can assure you that there are many people like me who do.

John Lewis, Scotland

Thanks for your kind words John – and let's just hope that ST Format continue to offer similar support in the future, although I for one won't hold my breath...



Selling point – a decent demo of Cubase Audio would help to sell Falcons, but many retailers simply can't be bothered...

POSITIVE ACTION

It seems that many of the letters I read in Atari-related magazines prematurely bemoan the demise of the ST. My old ST finally expired and was replaced with a 1Mb STe last year. As Nial Grimes pointed out in October's column, it is still an inexpensive and very versatile computer.

Why don't the doom and gloom merchants do something positive? I use my ST for various tasks including some DTP work for my Church; any work I do incorporates the Atari logo and the legend "Produced on Atari". I have convinced four of my friends to purchase STs by showing off its capabilities and although I'm not an expert, I have had small informal teach-ins to get the newcomers started. I have also recommended the purchase of *ST Review* – the more sales, the more likely the continued existence! Think about it: if every Atari owner in the UK converted two more to our platform, perhaps the support among software and hardware manufacturers would improve.

Let's stop the doom and gloom. If Atari won't provide the push, let's do it for them. After all, the best advert is always one from a satisfied customer and I have never met an ST owner who didn't think that their machine was a golden oldie.

Jim McKerracher, Ancoats

I agree with you up to a point Jim, but the lack of a reasonably priced Falcon has left those of us who desire a more powerful computer wondering whether to wait or join the queue to buy a PC or Mac.

MagiCMac (see preview on page 25) should result in a push to the latter, the upshot of which will be a thriving second-hand ST market. In fact, this single piece of software is likely to lead to the continued development of ST software, particularly in Germany.

It's nice to receive a letter from someone with such a positive attitude but when your ST finally bites the dust, you may find that the price of a second-hand Mac is just too enticing to refuse!

Incredible – MagiCMac offers a rather interesting upgrade path...

READER REPLY

When you had a battle of words with Paula Richards of *ST Format* some months ago, I sent a letter to yourself and Ms Richards asking you both to "grow up".

I thought your last editorial was going down the same path until I read it a second time. I couldn't believe your comments so I checked your facts. The November issue of *ST Format* did indeed carry a review of the *Championship Manager* end of season data disk; a telephone call to Domark backed up your premise that this was based on the Amiga version. I also noted the comments on System Solutions' DeskTopper – and the lengthy apology in the following issue of *ST Format*. A conversation with an advertiser showed that you were correct in your comments about *ST Format* going back on a promise to provide a disk and cover booklet for the December and January issues of the magazine and I do recall a News page piece in *ST Format* promising 13 issues a year.

I pride myself on being an intelligent human being and as such will always attempt to verify "facts" before I believe them. Having spent the best part of two days researching your editorial, I find that every word is true. What concerns me most is that I and every other *ST Format* reader would never have known that we were being deceived without someone like you writing an editorial such as this.

I have bought *ST Format* since issue 7; perhaps I have become anaesthetised over the years to its adaptation of the facts. After all, isn't there an old adage that one shouldn't let the truth get in the way of a good story? That will be the last time a copy of *ST Format* resides on my living room table. What I cannot understand is: why does *ST Format* outsell *ST Review*?

Peter Collins, London

At the time I wrote my previous editorial, I had no idea that ST Review was in the process of being sold to Pearsons, publishers of ST Format. Despite ST Format's ABC monthly sales figure of around 40,000 in the period of January to June 1994, the magazine is apparently selling only about 25,000 copies per issue at the moment, some 10,000 more than this magazine. I believe that ST Review is a far better mag, a belief backed up by many of your letters. Why aren't we the market leader? Distribution: ST Format's is good, ours is appalling!

Ultimately, any magazine that intends to appeal to, shall we say, a "mature" audience must be prepared to be honest and forthright. This is the attitude I have always adopted with ST Review. Had this not been so, I would have expected a competitor to take me to task. As it is, I have had the unenviable task of having to take such an action.

With only one ST title on the market, Peter, you and many others will probably eat humble pie and buy it. All I can say is that if there are articles and features that you find distasteful, inaccurate or just plain misleading, I trust that you will put pen to paper and complain, just as I have within my editorials...

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